The OIL WEEKLY
OIL and GAS ENGINEERING
FOR OIL AND GAS PRODUCERS
PIPE LINE DIVISIONS

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HUGHES CORE BITS

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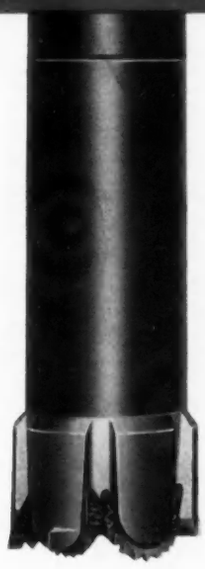
HARD FORMATION CUTTERHEAD



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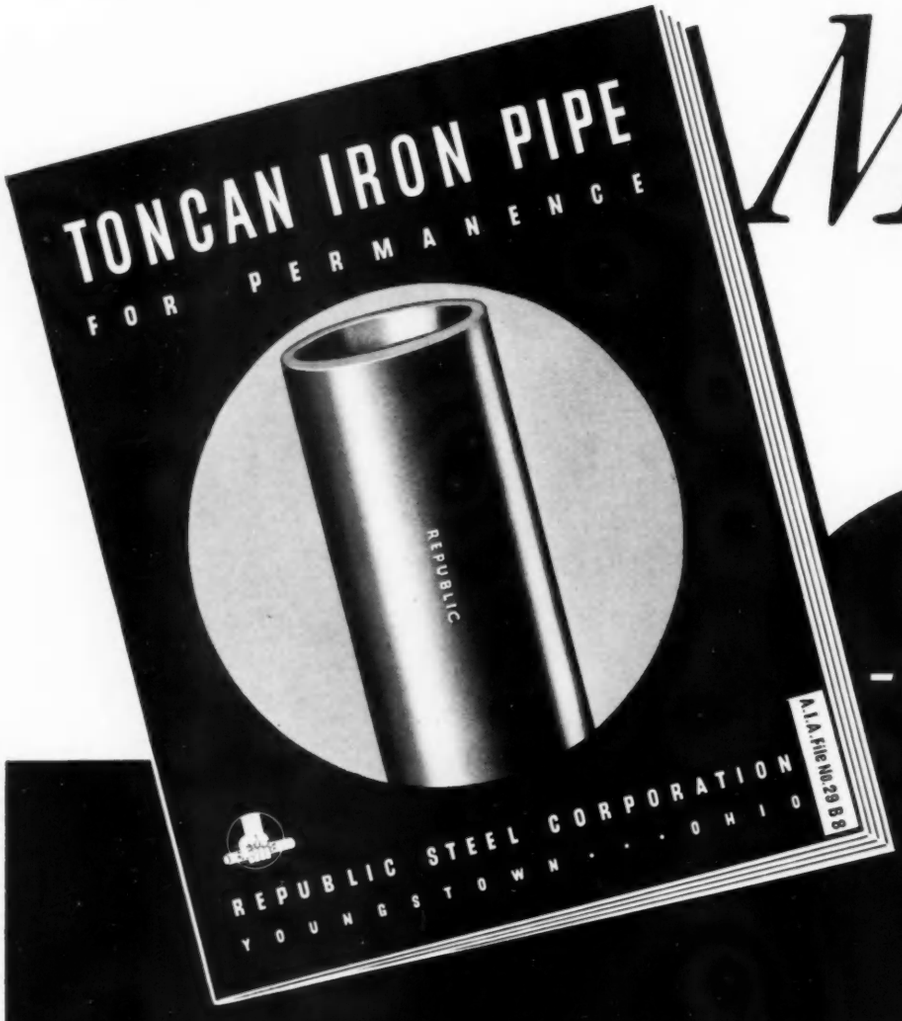

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S. W. ROBINSON
Editor

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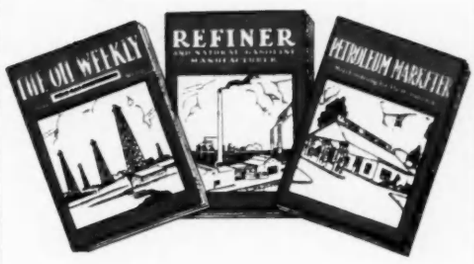

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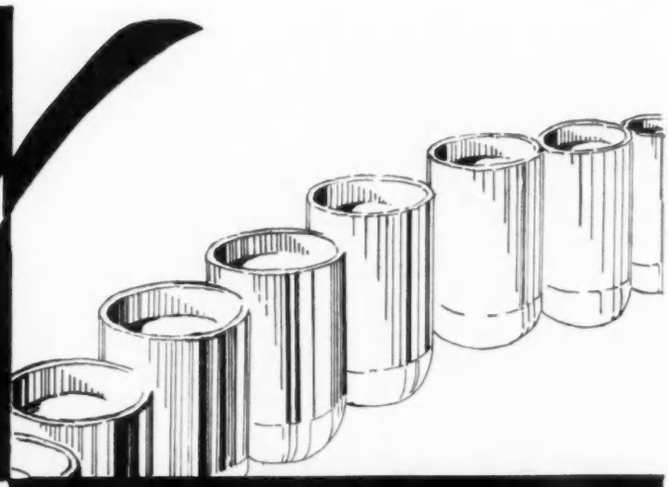
Check up on who uses it and why?



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THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING ▪ NEWS ▪ STATISTICS

The Changing Panorama

Events of the week pointed toward the climax of the petroleum code imbroglio.

NRA activity in Washington left no doubt of the determined drive to complete a set of regulations with voluntary acceptance the desired object.

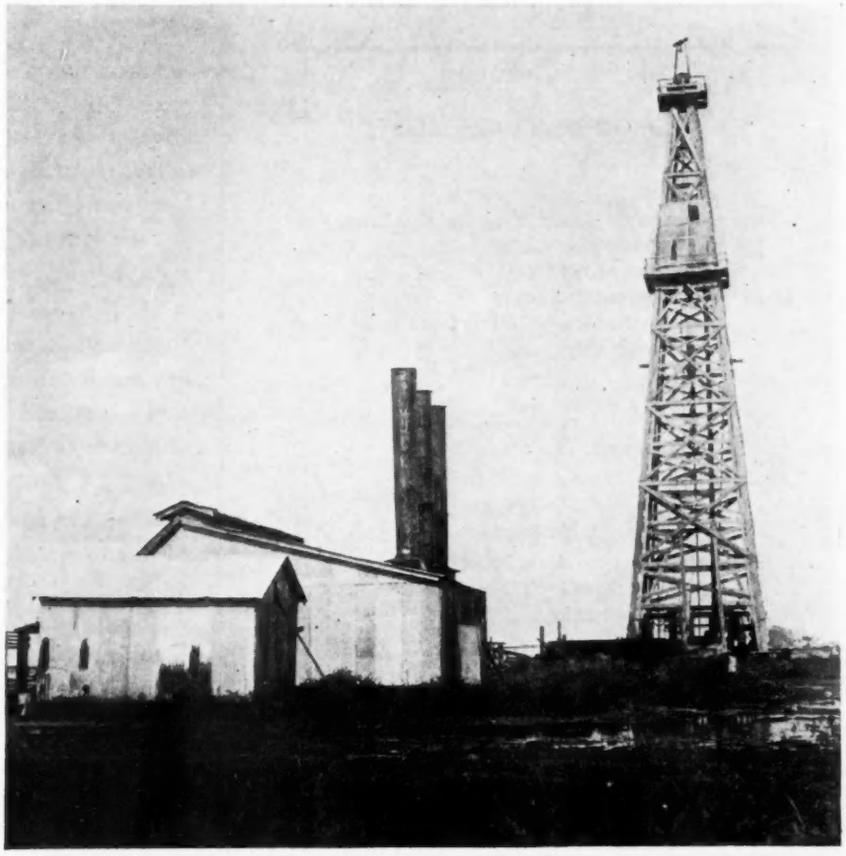
The Texas Railroad Commission set August 21 as the date for a statewide hearing on oil field production. Since the hearing was postponed in July because no petroleum code had been completed, the August date has been accepted as evidence that members of the commission anticipate a petroleum code before that date.

Unless some wand of magic has been found this code will not please all factions. Price fixing has divided the industry beyond the point of expecting a compromise to be satisfactory. It is unfortunate that this condition exists but fortunate that the alignment on the question is not such that preconceived opinions are proven. Each side of that controversy presents some unexpected adherents.

But the industry is due to have a code, perhaps one that no faction favors but one that the industry must respect. The attitude at Washington is sufficiently clear on that score. Officials will go to extremes to get voluntary agreement on a code but they will never give a thought to the possibility of a code not being accepted.

Partnership with government has its obstacles. At the head of the NRA sits a man who is bent on re-employment and increased wages, but he is not mildly concerned about increased revenue for meeting these. Industry comes before this man frequently to seek the revenue before providing the larger scale of employment.

In the case of the petroleum industry, factions within it sought to use the government for doing to each other what they could not do without assistance from Washington. The lease and agency is a case in point. That has been looked upon with disfavor for several years



GULF COAST DEEPEST . . . ***Yount-Lee Oil Company's Boyt 1, Liberty County, Texas which is washing to bottom at 9509 feet at last reports. A special section devoted to this remarkable record for Gulf Coast wells will appear in the August 21 issue of*** **THE OIL WEEKLY.**

in circles outside the integrated company group. But no law and no method could be found for halting the method of station control. When a code of fair practice came along it was embraced because it offered opportunity to accomplish what had been impossible.

On other scores integrated concerns would use the code for doing what otherwise had failed of accomplishment.

The impartial observer can not take sides in this petroleum tangle. Both faults and improper action are to be found with each faction.

An industry falters while its factions fight for advantage.

East Texas—A Loud Speaker

Last week the East Texas field gave up enough crude oil to push its total production past the 370,000,000 figure. That is but a fifth of what competent engineers expect as ultimate output.

Events at Washington have cast a shadow over East Texas, which has been and continues to be the source of trouble for this industry. Without East Texas men of the petroleum industry would have been spared thousands of miles of travel, countless telegrams and even more letters.

Long speeches are made in efforts to explain the evils of the petroleum industry. But in each of several hundred offices there is a man who knows why the industry is demoralized. He collects a set of figures and takes them to an adding machine. The total speaks louder than any speech in Washington, Austin or Oklahoma City.

The oil fields of the United States continue to give up more crude oil than the United States can consume. Refineries continue to convert an excessive amount of it into gasoline. Thousands of poorly equipped service stations spring up to offer gasoline at prices lower than older outlets can match with profit.

If East Texas had not produced 370,000,000 barrels of crude oil, plus several additional millions not recorded; if East Texas could not flow a million barrels today; if East Texas had never been drilled . . . such conditions can be woven almost into hope.

Some not given to speeches hold hope of a profitable petroleum industry for the day when East Texas output begins its decline.

The Oil Man's Calendar

AUGUST

20 *Texas Petroleum Council, Executive Committee, Austin, Texas.*

21 *Statewide Proration Hearing, Austin, Texas.*

23-26 *The American Society of Mechanical Engineers—6th National Oil & Gas Power Meeting, Atlantic City, N. J.*

SEPTEMBER

5-7 *North American Gasoline Tax Conference, Indianapolis, Indiana.*

20-22 *National Petroleum Association, 31st Annual Meeting, Traymore Hotel, Atlantic City, N. J.*

25 *American Gas Association, Natural Gas Department, Chicago, Illinois.*

Week 25 *International Gas Conference and 15th Annual Convention, American Gas Assn., Stevens Hotel, Chicago, Illinois.*

OCTOBER

24-26 *American Petroleum Institute, Fourteenth Annual Meeting, Chicago, Illinois.*

NOVEMBER

American Association Petroleum Geologists, Pacific Section, Los Angeles, California.

Anent the position of erstwhile "kickers against the pricks" in the matter of East Texas proration regulations, we have the following telegram from J. N. Saye of the firm of Saye, Smead and Saye, attorneys, of Longview, Texas, to whom our Austin correspondent is due an apology for quoting what he hears around the state house:

"Your issue July 24 you state that the legality of the President's executive order under the National Industrial Recovery Act will be tested in a federal district court has been intimated since it was made public. In Austin it is heard the law firm of Saye and Saye of Longview is ready to file a petition.

"You are advised that no one has employed the firm of Saye, Smead and Saye, there being no such firm as Saye and Saye, to contest the President's order. We do not represent L. H. Gray and are not authorized to speak for him. We do represent John Olvey, and he contemplates no action against the President's order. On the other hand he is supporting the President's program.

"It would be well for you to obtain your information about the activities of my firm from some member of it rather than from some unauthorized source in Austin. While I do not think that the President's order is sacred and invulnerable, I contemplate no action against it at this time. Will you publish correction?

"J. N. Saye."

Output Control Expected Basis For New NRA Oil Code

Hearing with industry's representatives probably to be called early in week

WASHINGTON, D. C., AUGUST 11.

COMPLETION of a new draft of the oil industry's recovery code within a very short time, possibly by the beginning of the week, was predicted today by officials of the National Recovery Administration who, with Secretary of the Interior Ickes, have been working on the problem for the past 10 days.

Details of the new code are being closely guarded, but it is understood there will be little change in the production provisions. It is anticipated that this section will provide for the allocation of output by a federal agency and there are indications that the administration may support its former plan for having the government fix pool and field allowables for a state where the state authorities fail or refuse to do so.

It is believed that the refining provisions will show little change but that there may be some amendment of the marketing code, with the possible re-inclusion of a provision covering lease and agency, on which it was indicated in the District of Columbia Supreme Court today the Federal Trade Commission will take no action.

In all probability the labor provisions of the code will be the same as those in the interim agreement approved for the industry by General Johnson this week.

A further opportunity is to be given the industry to discuss the code before it is submitted to the President, but inasmuch as several days' notice is to be given of the hearing it is not likely that any meeting can be held before at least the middle of the week.

WASHINGTON, D. C.—Wages and working hours for employes in the oil industry were set in a code given the approval of General Hugh S. Johnson, Administrator for Industrial Control, August 8, as a substitute for the President's blanket code, to apply until the code for the industry is adopted.

The purpose of the administrator's action was to permit the members of the oil industry to display the "Blue Eagle" given those who agree to abide by the terms of the codes, which would not be available to the industry otherwise because of the fact that its code has not been completed.

The rates of minimum pay are along the lines of those proposed by the industry in its code, ranging from 45 to 52 cents per hour in drilling, production, refinery and pipe-line operations, and from 40 to 47 cents in marketing operations. The working week in all branches is fixed at 40 hours. Rates for filling station employes range from $12 to $15 per week, depending upon the size of the city in which located.

The code provides that the differentials between the rates for skilled labor and the minima provided for common labor are not to be less than those existing on July 1, 1929, and in no instance to be less than 45 cents per hour for refinery stillmen or 75 cents for rotary drillers.

The full code, as approved by General Johnson, is as follows:

"A Code of Fair Competition for the Petroleum Industry has been prepared by the Administration and the industry has requested the substitution of the following paragraphs of the said code:

ARTICLE II
Labor

"Section 1. In drilling, production, refinery and pipe-line operations, the maximum hours for clerical employes shall not exceed 40 per week. All other employes in these operations, except executives, supervisors and their immediate staffs and pumpers on 'stripper' wells located so as to make relief impracticable, shall work an average of not more than 36 hours per week with the right to work a maximum of 40 hours per week for any six weeks within any 26 week period, but not more than eight hours in any one day. Reports will be made to the Deputy Administrator by the tenth of the following month showing the extent and reasons for utilizing the maximum of 40 hours as provided for in this section.

"To establish geographic divisions for the petroleum industry, the geographic divisions as shown by the United States Department of Labor, Bureau of Labor Statistics wage reports (October, 1929) have been adopted. The minimum hourly rates for the employes above specified in each of these geographic divisions shall be as follows:

	Minimum Rate Per Hour
Middle Atlantic Division:	
New York, New Jersey Pennsylvania	52c
New England:	
Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut	52c
East North Central:	
Ohio, Indiana, Illinois, Michigan, Wisconsin	52c
West North Central:	
Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas	48c
South Atlantic:	
Delaware, Maryland, District of Columbia, Virginia, West Virginia, *North Carolina, *South Carolina, *Georgia, *Florida	45c
East South Central:	
Kentucky, Tennessee, *Alabama, *Mississippi	45c
West South Central:	
Arkansas, *Louisiana, Oklahoma, *Texas	48c
Mountain:	
Montana, Idaho, Wyoming, Col-	

*For refinery and pipe-line work in states so marked, not more than ten per cent, constituting common labor only, of the total number of employes in any plant or operation may be paid at not less than 80 per cent of this minimum rate.

Washington, D. C., August 11.—Members of the committee of 24 tonight were asked to meet with officials of the National Recovery Administration August 16, when General Johnson will submit for their consideration a new recovery code.

orado, New Mexico, Arizona, Nevada, Utah 50c

Pacific:

Washington, Oregon, California..52c

"Section 2. In market operations all employes, including clerical, but excluding executives, supervisors and their immediate staffs, shall not work more than 40 hours per week. The minimum rates for such employes (other than those employed in filling or service stations, garages or other institutions which sell gasoline to the public) in each of the geographic divisions above specified shall be as follows:

Minimum Rate Per Hour

Middle Atlantic Division:

New York, New Jersey, Pennsylvania 47c

New England:

Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut 47c

East North Central:

Ohio, Indiana, Illinois, Michigan, Wisconsin 47c

West North Central:

Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas 42c

South Atlantic:

Delaware, Maryland, District of Columbia, Virginia, West Virginia, *North Carolina, *South Carolina, *Georgia, *Florida 40c

East South Central

Kentucky, Tennessee, *Alabama, *Mississippi 40c

West South Central:

Arkansas, *Louisiana, Oklahoma, *Texas 40c

Mountain:

Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Nevada, Utah 45c

Pacific:

Washington, Oregon, California..47c

"Section 3. No filling or service station employe, nor any employe of any garage or other institution selling gasoline to the public shall receive less than $15.00 per week in any city of over 500,000 population or in the immediate trade area of such city; nor less than $14.50 per week in any city between 250,000 and 500,000 population, or in the immediate trade area of such city; nor less than $14.00 per week in any city between 2500 and 250,000 population, or in the immediate trade area of such city; and in towns of less than 2500 population such employes shall receive wage increases of not less than 20 per cent, provided that this shall not require wages in excess of $12.00 per week.

"Section 4. It is the purpose of the labor provisions of this code that all employes engaged in similar work in each of the geographic divisions shall be placed on the same basis of hours and receive at least the minimum earnings provided for each class of work in the industry.

"To effectuate this purpose, the differentials between the rates for skilled jobs and the minimums established in this code for common labor will not be less than those existing in the industry in each geographic area on July 1, 1929; but in no case will such differential for refinery stillmen be less than 45 cents per hour or for rotary drillers less than 75 cents per hour.

"Section 5. Every person subject to this code shall insert a provision in all contracts made by him for work within the industry, whereby the contractor agrees that his employes, or those of any sub-contractor, shall receive the rates designated by this code for each respective class of work and shall not work in excess of the schedule of hours in this code.

"Section 6. On and after the effective date of this code the employer in the petroleum industry shall not employ any minor under the age of 16 years.

"Section 7. Employes in this industry shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from interference, restraint, or coercion by employers of labor, or their agents, in the designation of such representatives or in self-organization, or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection. No employe in this industry, and no one seeking employment therein, shall be required as a condition of employment to join any company union or to refrain from joining a labor organization of his own choosing. Em-

*For market operations in states so marked, not more than 10 per cent, constituting common labor only, of the total number of employes in any plant or operation may be paid at not less than 80 per cent of this minimum rate.

Washington, August 11.—Thousands of telegrams from employers requesting specific information as to just what steps must be taken in order to receive the Blue Eagle, are still pouring into National Recovery Administration headquarters here.

In order that these queries may be answered clearly and concisely, Gen. Thomas S. Hammond, Executive Director of the President's Re-employment Program, today laid down the exact procedure, in a statement to the press. Gen. Hammond will also broadcast the procedure over an NBC hockup tonight at 9 p. m. E. S. T.

The statement follows:

To all employers who are not working under codes approved by the President and who ask: "How do I obtain the Blue Eagle?" the answer is, there are three methods which may be pursued.

1. Sign the President's Re-employment Agreement as is—without change or modification. Mail it to the District Office of the Department of Commerce. Put its provisions into operation. Sign the Certificate of Compliance. Hand it to your local postmaster, who will post your name on the Honor Roll and hand you your Blue Eagle.

2. If your line of business has submitted a code and the NRA has temporarily approved hours and wages to be in effect until the code itself is approved by the President, do this:

Sign the President's Re-employment Agreement. Mail it to the District Office of the Department of Commerce. Comply with its provisions as far as possible. Now, if a specific code has been submitted by your industry and its wage and hour provisions accepted by a NRA Deputy Administrator, sign the Certificate of Compliance with this endorsement: "To the extent of NRA consent as announced, we have complied with the President's Agreement by conforming with the substituted provisions of the code submitted for the (blank) trade or industry." Hand this to your local postmaster, who will post your name on the Honor Roll and hand you the NRA Blue Eagle.

3. If neither 1 nor 2 applies and you feel you have to file a petition for relief, do this:

Sign the President's Re-employment Agreement, mail it to the District Office of the Department of Commerce. If you find you cannot comply with most of its provisions, then prepare a petition to the NRA asking for a stay or postponement of those provisions which would produce an "unavoidable hardship." Submit this petition to a trade association of your industry, or, if none, to your local Chamber of Commerce, or such other organization as can properly vouch for the facts. If officially accepted by one of the above, add the following to the face of your certificate:

"Except for those interem provisions regarding wages and hours which have been approved by the (blank) association or organization."

Then the postmaster will authorize you to use the NRA Blue Eagle. This last procedure may take some time and is, of course, subject to reversal when your petition is reviewed by the NRA.

ployers of labor in this industry shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment approved or prescribed by the President."

For the following paragraphs of the President's Reemployment Agreement: Sections 2, 3, 4, 5, 6 and 7.

"After consideration and with the approval of labor advisers and industrial advisers, N. R. A. has decided to permit such substitution and employers in such industry may sign the President's Agreement on the understanding that such substitution shall be automatically effective and they may comply with the President's Agreement by conforming to the requirements of such Agreement, as amended by the inclusion of the above paragraphs taken from such Code of Fair Competition as submitted and substituted in accordance with this consent.

"When an employer signs the certificate of Compliance with the additional note thereon as above, he should bear in mind that the President's Agreement ceases upon formal approval, after public hearing of the entire Code for the Petroleum Industry and he should also understand that the provisions substituted, as the same may appear in the formal Code of Fair Competition may vary from their form as above quoted.

"After the President's Agreement, as amended by such substitution, has been signed by any employer in such industry, the requirements of the Certificate of Compliance will be met by signing the standard form and adding thereto the note:

> "To the extent of N.R.A. consent as announced we have complied with the President's Agreement by complying with the substituted provisions of the Code submitted for the Petroleum Industry.

"After the date hereof, the Certificate of Compliance signed by employers in such Industry with the additional note above mentioned will entitle them to National Recovery Administration Insignia."

Drilling Contractors Meet At Dallas on Code

Dallas, Texas.—Drilling contractors in Texas, Louisiana and Arkansas are to assemble here at the Adolphus Hatel at 10 a.m. August 15 to perfect a permanent organization and formulate a code that will enable them to comply with the terms of the National Industrial Recovery Act. A preliminary gathering of contractors operating in the above states was held here early last week, with M. J. Delaney, Dallas contractor, acting as chairman. This group took the initiative in extending invitations to all contractors in the three states to take part in the setting up of an organization.

New contracts awarded by the large oil companies are requiring drilling contractors to adhere to the wage scale and restricted working hours per man as set forth in the oil code. This development makes it urgent that the contractors act promptly in adopting a code of their own that will dovetail with the oil code.

Program for the scheduled Dallas meeting calls for the appointment of a committee to formulate a code to be submitted to the organization for adoption, then it is planned to forward same to General Hugh S. Johnson at Washington for approval.

State-Wide Hearing for Texas August 21

Austin, Texas.—The Texas Railroad Commission has scheduled a statewide proration hearing for Austin, August 21. From evidence adduced at this hearing, the commission plans to promulgate proration orders for Texas that will conform to the federal oil code which they expect will be completed by that date.

The last statewide hearing, held at Austin on July 31, was hastily concluded, and hearings on several fields were postponed, the commission choosing to delay any revision of the proration orders until the oil code was completed.

Court Rules *Federal Commission Not Responsible for* Lease and Agency

Washington, D. C., August 11.—Determination of the status of the "Lease and Agency" practice of the major oil companies today was thrown back upon the National Recovery Administration when Justice Joseph Cox of the District of Columbia Supreme Court refused a writ of mandamus to compel the Federal Trade Commission to issue formal complaints against the practice.

Petition for the writ was filed August 4 by Warner I. Cubberly on behalf of the Chicago Service Station Operator's Association, the National Association of Gasoline Retailers and a number of other filling station organizations throughout the country.

Contending that complaints regarding the lease and agency and lease and license practices had been pending before the commission for more than a year without any decision, the complainants sought to compel the commission to make an immediate decision and issue formal complaints.

Efforts to write into the oil industry's recovery code a prohibition against the practice was halted during the recent hearing before the National Recovery Administration by General Johnson's announcement that no action would be taken until the trade commission had made a report. The petition was filed almost immediately thereafter, in an effort to hasten the commission's decision.

Arguing his motion before Justice Cox today, Cubberly declared this to be the "last resort" of the independent filling station operators, whose existance is threatened by reductions in the margins on gasoline recently announced by the oil companies. The provisions of the federal trade commission act itself and court decisions previously rendered thereon, he contended, supported his claim that the court could issue a writ of mandamus.

Disclosing that the Federal Trade Commission would not issue complaints involving the lease and license practice, Martin A. Morrison of the commission's legal staff developed that the commission had been unable to find that the matter involved interstate commerce, one of the requisites for action.

Replying to contentions of the complainants that the commission in 1928 had submitted a report to the Senate in which various practices were discussed at length, including the lease and agency and lease and license operations, Morrison pointed out that in that report the commission announced that the legal status of these activities was being studied.

Nothing contained in the complaints which have been filed with the commission, he said, met the requirement that interstate commerce was involved, and the commission is unable to take any action in the matter.

Refusing to issue a writ of mandamus, Justice Cox observed that the question of whether the requirements of the Federal Trade Commission act are met in complaints is one for the commission itself to determine. "The matter here involves a number of points upon which only the commission can pass", he pointed out.

Some Highlights *of Things Seen and Done at World* Petroleum Congress

As observed for The OIL WEEKLY
By DR. J. BRIAN EBY
Consulting Geologist and Geophysicist

THE World Petroleum Congress from the point of view of number and quality of papers and international attendance was a success quite exceeding the fondest hopes of its organizers, the Institution of Petroleum Technologists. Preliminary estimates of papers and attendance were more than doubled.

The very scarcity of oil in the major countries of Europe makes it a problem of acute interest, not only to their oil technologists, but their governments as well. Several European geologists displayed their obvious vexation that Nature should have so ruthlessly discriminated in bestowing her oil munificence to the North American continent. In part explanation for this error, Dr. A. Wade, British geologist, pointed out in Paper No. 1, entitled "The Distribution of Oilfields From the Theory of Continental Spreading," that in line with Gutenberg's theory of continental spreading, the North American continent in drifting northward to its present position "hesitated" longer in the tropics than its sister continents and hence had greater opportunity for acquiring oil-forming organisms. The impression remained however that oil in commercial quantity must and would be found in western Europe.

THE visit to the National Physical Laboratory was an instructive feature of the congress. Sir Joseph E. Petavel, K. B.E., received the visitors and directed them in groups to the various departments.

The Physics Department exhibited apparatus and methods for calibrating precision thermometers from minus 80° to 450° C. The methods of testing reference screw gages to American Petroleum Institute specifications were shown by the staff of the Meterological Department. In the Engineering Department various friction machines were in operation testing selected samples of metals. The Metallurgical Department exhibited the procedure of standardizing Redwood viscometers. A novel and effective method of locating cracks in steel was demonstrated by spreading a thin coating of mixed paraffin and iron filings over the surface of the metal to be tested and passing a current through it. The iron filings segregate themselves along the lines of invisible breakage.

The William Froude Laboratory contains complete equipment for the making and testing of ship models and propellers. The Alfred Yarrow Tank and the New Tank are huge concrete enclosed pools with maximum length of 600 feet; width 30 feet; and depth 12 feet. An electric carriage overrides the pool and is capable of pulling models over the surface of the water up to 35 miles per hour. Suitable records of resistance, etc., can thus be made.

Within the Darrow Tank dwell seven eels, each individually recognized and named by the caretaker. To demonstrate his control over his fishy friends, the keeper called for "Jonah" and "Jonah" came forth to nibble the said keeper's finger. What would you think of that?

AN English formal banquet is thoroughly ornate, edible, and is a joyous occasion, and the congress dinner was no exception. The display of medals of heroism and emblems of high rank was both glittering and impressive. This particular dinner was of especial interest in bringing to the same platform speakers on both sides of the controversial hydrogenation problem.

The Right Honorable Sir Godfrey Collins M.P., and Secretary of State for Scotland, cabinet member and guest of honor, warmly commended his government's action in sponsoring hydrogenation on a national scale. He further ventured the hope that large scale development of the oil shales of his native Scotland would not have long to await.

To this presentation of the government's case, Sir John Cadman replied with infinite tact and innate humor the side of the oil industry. Among other things he was reminded, he said, of the American in Scotland who needed and received a blood transfusion, for which with accustomed American generosity, he promptly paid the obliging Scot $500. The American needing a second instalment of blood, the same Scot gladly obliged again. Some days later the astonished Scot received a letter from the American advising that now being imbued with Scottish blood the American would make no further payment and that the first was already too much. In wishing his governments program bon voyage however he cautioned strongly against increasing oil taxes for fear of forcing oil and gasoline users to other sources of energy.

Dr. F. Bergius, German inventor of the hydrogenation process, knocked a home run for his side in blandly pointing out that it was Sir John himself who invited Dr. Bergius and his brain-child to England in 1920. Has the child grown out of hand? Speaking in fairly good English Dr. Bergius made his point in effective but clever humor.

Time enough remained for the president, Mr. T. Dewhurst, to rise in defense of the oil fraternity and with fitting diplomacy smooth over the troubled surface and surrender the solution to the future. So ended the congress dinner.

NOTWITHSTANDING vehicular traffic drives to the left, pedestrians walk chiefly to the right. American influence again? Incidentally London bus, taxi, and subway systems are second to none, being clean, swift, well-marked and routed, and comparatively inexpensive.

COMMANDER ROWLAND E. STOKES-REES, 25 years in the Royal Navy and secretary to the Institution of Petroleum Technologists since 1918, will retire in September to the Isle of Guernsey in the Channel. For his many American friends his address will remain care of Aldine House, Bedford street, London, W. C. 2, with the words "please forward."

AN enormous grapevine, called "Black Hambro," is growing at Hampton Court, the castle of King Henry VIII and others, that is said to have been planted in 1768. Its girth, one foot above the ground, is six feet nine inches and when visited was literally laden with bunches of grapes the size of walnuts. These grapes, as of yore, are reserved for the royal tables.

GREAT FOSTERS, where lunch was served on the Sunday excursion, July 23, is as the booklet says "steeped in tradition." It was the home of Queen Elizabeth and Anne Boleyn. It is one of the oldest existing moated houses in England. The oak panelling, the marvelously carved mantels, and the magnificently decorated ceilings are reported without equal in the world.

SUNDAY afternoon, being unusually hot and clear, brought tens of thousands of Londoners to the banks of the Thames. Congress excursionists on motor launch threaded slowly past bathers, canoes, and larger craft for 15 miles from Runnymeade to the Thames Riviera on Taggs Island. Along the Thames fashionable and exclusive clubs, moderate bungalows and numberless public parks and

(*Continued on page* 12)

Oil Technologists and Guests

World Petroleum Congress Banquet, London, July 24

Guests of Honor

The Rt. Hon. Sir Godfrey Collins, K.B.E., C.M.G., M.P.
His Excellency the Polish Ambassador.
His Excellency the German Ambassador.
The Egyptian Minister
The Mexican Minister
The Persian Charge d'Affaires
The High Commissioner for the Irish Free State.

Guests, Delegates and Members

Aldrich, B.
Ames, R. H.
Anderson, Dr. R. P.
Armstrong, E. F.
Arvilla, Jose
Ashton, H. S.
Ashton, Hubert
Auld, Lt.-Col., S. J. M., O.B.E., M.C.
Auld, Mrs. S. J. M.
Badrick, C. G.
Ballet, J.
Barber, C. Thomas
Basgan, Ing. J.
Bastet, M. C.
Bechett, W. S.
Bergius, Dr. F.
Berteloot, J. G.
Bihoreau, C. H.
Bing, Jean
Bird, R. R.
Bleyberg, Dr. Ing. W.
Blum, Dr.
Bolton, R. P.
Bolton, Mrs. R. P.
Bowman, T. Sutton
Boyle, J. W.
Brame, Prof. J. S. S., C.B.E.
Breme, Fr.
Brey, C. H. de
Bridgewater, Alan S.
Brown, Ernest, M.C., M.P.
Burgess, T. C. J.
Cadman, Sir John, G.C.M.G.
Cadman, Captain W. H.
Callingham, L. G.
Cargill, Sir John T., Bart.
Carter, Ashley
Catherall, A. P.
Chappell, W. C.
Charpentier, Dr. W.
Clarke, Miss Winifred, S. E.
Claxton, G.
Clemenceau, Pierre
Comyn, J. M.
Concha, J. G. de la
Cooper, H.
Corfield, W. G.
Cox, A. W.
Coxon, G. H.
Crowther, J. G.
Cuthill, James
Dam, N. L.
Dewhurst, T.
Dewhurst, Mrs. T.
Dichter, Gabriel
Dichter, Madame G.
Dintilhac, Jean G.
Duff, I. A. J.
Dumanois, P.
Dunstan, Dr. A. E.
Dyck, Dr. W. J. D. van
Eastlake, Arthur W.
Eby, Dr. J. Brian
Representing The Oil Weekly.
Edwards, G. J.
Edwards, Mrs. G. J.
Egloff, Dr. Gustav
Ellis, B. J.
Evans, Elliott A.
Evans, Mrs. E. A.
Evans, Percy
Faulkner, Sir Alfred E., C.B., C.B.E.
Ferreyos, Alfredo
Ferry, C. L. M.
Figueroa, Alejandro
Fischer, Dr. R. K.
Franck, Jean
Frank, Dr. Fritz
Frank, Fraulein, A.
Fujii, Eng. Comdr. Y., I.J.N.
Furniss, G. W.
Garner, Dr. F. H.
Gibb, Maj.-Genl. Evan, C. B., C.M.G., C.B.E., D.S.O.
Giesen, Theo
Giffard, H
"Glasgow Herald"
Glinn, R. J.
Godden, H. F.
Gooday, Wilfred E.
Goodwin, Eng. Vice Adml. Sir George, K.C.B.
Gorden, C.
Gottschalk, J. A.
Gray, C. H.
Grote, Dr. Wolfgang
Hagerman, Tor H.
Halder, Ing. W.
Hardy, A. C.
Harper, H.
Hartley, A. C.
Heinrici, Dr.
Hernandez, J. A.
Herzenberg, Dr. J.
Hendrick-Cooke, Major
Hendrick-Cooke, Mrs.
Hilliger, B.
Hittlinger, A.
Hoffert, W. H.
Holland, Sir Thomas H., K.C.S.I., K.C.I.E.
Howe, W. H.
Huber-Ruf, A.
Hunter, Campbell M., O.B.E.
Hunter, Mrs. C. M.
Jackson, J. S.
James, H.
Jelffs, W. F.
Jirasek, John W.
Jones, Mrs. F. Llewellyn
Jones, W. H.
Kelly, C. I.
Kessler, J. B. Aug.
Kewely, James
Kewely, Mrs. J.
King, L.
Kogerman, Prof. P. N.
Knighton, C. W.
Kroch, Emeric
Kroening, Herr
Kverndal, Olaf
Lamb, W. S.
Lederer, E. R.
Lessing, Dr. R.
Lisle, T. Orchard
Lyons, Col. Sir Henry G.
Madgwick, T. G.
Maistre, C. le, C.B.E.
Malschaert, F. P.
Marks, Gerald
Markus, Hans
Mayer, Dr. A. W. Joh
Mayer-Rutgers, Madame Elis
Mayerheim, Herr
Mayo E. W.
Mehta, Framroz D.
Meyjes, Ir. F. L.
Migaux, L.
Milne, D.
Mitchell, James
Mitchell, R. J.
Mitchell, W. C.
Mond, Dr. A. L.
Moor, H. H.
Moore, Harold
Moos, Dr. August
Moos, Madame A.
"Morning Post"
Mortleman, Miss B. A.
Mulert, Dr. Bodo
Namikawa, Eng. Lt. Comdr. T., I.J.N.
Norlin, Evert
"Oil News"
Olaya, Luis
Oliphant, Sir Lancelot, K.C.M.G., C.B.
Palmer, Russell
Parker, R. C.
"Petroleum Times"
Pickering, W. B.
Pier, Dr. Matthias
Pilat, Dr. S.
Pineau, Col. L.
Plank, R.
Pontopiddan, Dr. H.
Pope, A. W.
Pope, P. C.
Press Association
Pustowka, A.
Rappoport, F. G.
Redgrove, Dr. E. R.
Reid, Alexander, J. P.
Reinerke, A.
Restrepo, Saturnino
Retailliau, E.
Reuter, E. H.
Reydon, I. J. F.
Richard, Dr.
Robertson, Sir R., K.B.E.
Robinson, T. W. S.
Roche, Udo F. von la
Roderer, W. R.
Roegier, M.
Rogers, R. B.
Romanes, J.
Ronca, James
Rosas, Agustin
Rysselberge, Dr. M. van
Sams, C. E. R.
Sanders, J. McConnell
Sanz, R.
Schmitz, P. M. E.
Schulz, Prof. Wilhelm
Schwarz, Tech. Rat. Robert
Schwarz, Frau Hedda
Scott, E. B.
Sell, George
Shatwell, Dr. H. G.
Shatwell, Mrs. H. G.
Shipman, E. M.
Shuckberg, Sir John, K.C.M.G., C.B.
Singer, Dr. L.
Slator, E., M.B.E.
Slomnicki, J.
Smith, A. Carrick
Smythe, H.
Sohn, Dr. Karl
Somazzi, Dipl. Ing.
Somerville, P. G.
Sonneveld, J.
Southwell, C. A. P.
Spielmann, Dr. Percy E.
Springhall, E. D.
Starling, F. C.
Steel, A. K.
Stephens, H. Powell

(Continued on next page)

Oil Technologists and Guests, London Banquet

(*Continued from preceding page*)

Stewarts & Lloyds
Stokes-Rees, Comdr. R. E., R.N.
Strachan, Miss A. M.
Stuart, Dr. Murray
Stuart, Mrs. Murray
Stutzer, Dr. O.
Suida, Prof. Dr. H.
Suit, L. F. A.
Sutton, William
Tantareanu, A.
Taylor, J.
Taylor, Mrs. J.
Temme, Dr.
Thole, Dr. F. B.
Thomas, Edouard
Thompson, A. Beeby, O.B.E.
Thorn, E. G.
Thorn, Mrs. E. G.
"Times, The"
Timmins, L. P.
Tizard, H. T., C.B.
Tweed, R. R.
Ubbelohde, Prof. Dr. L.
Urban, Dr. Gustav
Uren, Lester C.
Vellinger, E.
Verdier, J.
Vincent, J.
Vincent, Madam J.
Wace, Brig.-Genl. E. G., C.B., D.S.O.
Wade, Dr. Arthur
Wade, Mrs. Arthur
Wakefield of Hythe, Lord, C.B.E.
Wallis, A. B.
Wallis, Mrs. A. B.
Walther, C.
Waterman, Prof. Dr. H. I.
Waterman, Madame H. I.
Watson, R. I.
Weelden, Dr. A. van
Weiss, H.
Weiss, Madam H.
Wheatley, H. H., C.B.E., M.C.
Whigham, G. C.
Wigney, W. J.
Wilson, S. R.
Wilson, W. J.
Winterfeld, Eduard von
Woog, Paul
Woog, Madame P.
Woolcock, J. W.
"World Petroleum"
Zaepke, Dr. Ing. O.
Zetzsche, Herr

(*Continued from page* 10)

camps, permit all Londoners, irrespective of circumstances, to share the water. The King's own white swans are a delightful Thames institution. To conserve a permanently high water level, locks are located every few miles.

THE closing meeting of the congress on Tuesday afternoon was a joint meeting of all the sections. It was devoted entirely to the passage of resolutions referring all standardization matters to Committee No. 28 of the International Standards Association. R. P. Anderson, the American Petroleum Institute, New York City, is now American Secretary for the International Standards Association.

THE matter of future congresses will have to come from the heart. It will not be foisted on any organization or country. In the present instance it was entirely the idea, plan and execution of the British oil scientific body, the Institution of Petroleum Technologists. Probably the American Petroleum Institute might handle such a congress in 1936 or 1937? While those present felt the London congress was most successful, its true worth to the oil industry as a whole can better be ascertained only after its papers and discussions have been compiled, published and distributed to all.

Solicitor Thinks Hot Oil Situation Well in Hand

Oklahoma City.—The fight against "hot" oil through federal assistance was extended to Oklahoma on Monday and Tuesday of the past week when J. Howard Marshall, special solicitor for the Department of Interior, and G. G. Frazier, special agent of the department of investigation, met with oil men and executives in Tulsa and Oklahoma City. Following conferences with members of the Oklahoma Corporation Commission and with operators in the prorated pools, Marshall stated that he was optomistic over the possibility of entirely eliminating illegal production.

"We have devised a system of affidavits for the Oklahoma City pool patterned after the system now used with success in East Texas," Marshall said. "The whole purpose is to devise a form of clearance paper that will permit us to spot oil immediately when it is 'hot' and bottle it up before it's shipped. The whole program is to put as little burden on the legal producer as possible and yet to have enough system of checks to really catch the fellow running the 'hot stuff'."

Federal Judges Hold That State Can Regulate Pipe Lines

Austin, Texas.—Power of the Texas Railroad Commission to determine the amount of oil handled by a pipe line company, regardless of interstate affiliations has been upheld by a three-judge federal court in a decision handed down at Tyler.

In the case of Atlas Pipe Line Company vs. R. S. Sterling, before Federal Judges Hutcheson, Grubb and Wilson, the court said:

"The orders . . . specifically complained of are:

"1. The order requiring installation of meters to enable the Commission to determine the amount of oil transported.

"2. The order requiring it (the pipe line company) to file with the commission . . . reports required of transporters of oil . . . These reports in substance have to do with the source, the amount and the character as to legality, of the oil tendered to and transported by the pipe line.

"3. The demands of the commission that it, or its duly authorized agents, the Attorney General, or his assistants . . . be allowed to inspect its books and records when they may deem it necessary.

"In general, it is claimed that the statutes authorizing such demands and actions are in their tenor, and because of the penalties imposed, unconstitutional. It is further claimed that if the statutes are valid, the orders and actions of the commission under them are oppressive and burdensome beyond the grant of the statute.

"We think it perfectly clear that, as applied to plaintiff, the complained of statutes are valid; that the requirements they make in no manner infringe upon any of its constitutional rights.

"Plaintiff's broad position comes in the end to no more than an insistence upon its rights to transport, inviolation of the express prohibitions of the statute, oil which has been illegally produced . . . No reason presents itself to our minds for believing that the Legislature, having the power to conserve the natural resources of the state, is without power to impose upon common carriers by pipe line, inter and intra state, police regulations to make its prohibition against wasteful production, effective.

"It is hardly claimed, it is certainly not proven, that the requirements of the commission cannot be complied with without visiting irreparable injury on the plaintiff. What is in effect asserted is that since plaintiff (Atlas) is engaged in the business of transporting oil, an article of interstate commerce, the commission may not, in regard to reports and disclosures, impose duties upon it which require an expenditure of time, money or effort by it. We think the decisions cited do not support this view. The state may subject interstate as well as intrastate carriers to reasonable police regulation for the purpose of enforcing the public policy of the state in regard to shipments into or out of it.

"We see no reason to doubt that oil illegally produced, may not be lawfully transported."

The interlocutory injunction prayed for was denied.

For more than two years the commission has sought to enforce rules and regulations of this nature against Atlas Pipe Line Company and other pipe lines operating in the East Texas oil field. Previously, federal injunction has prevented this action.

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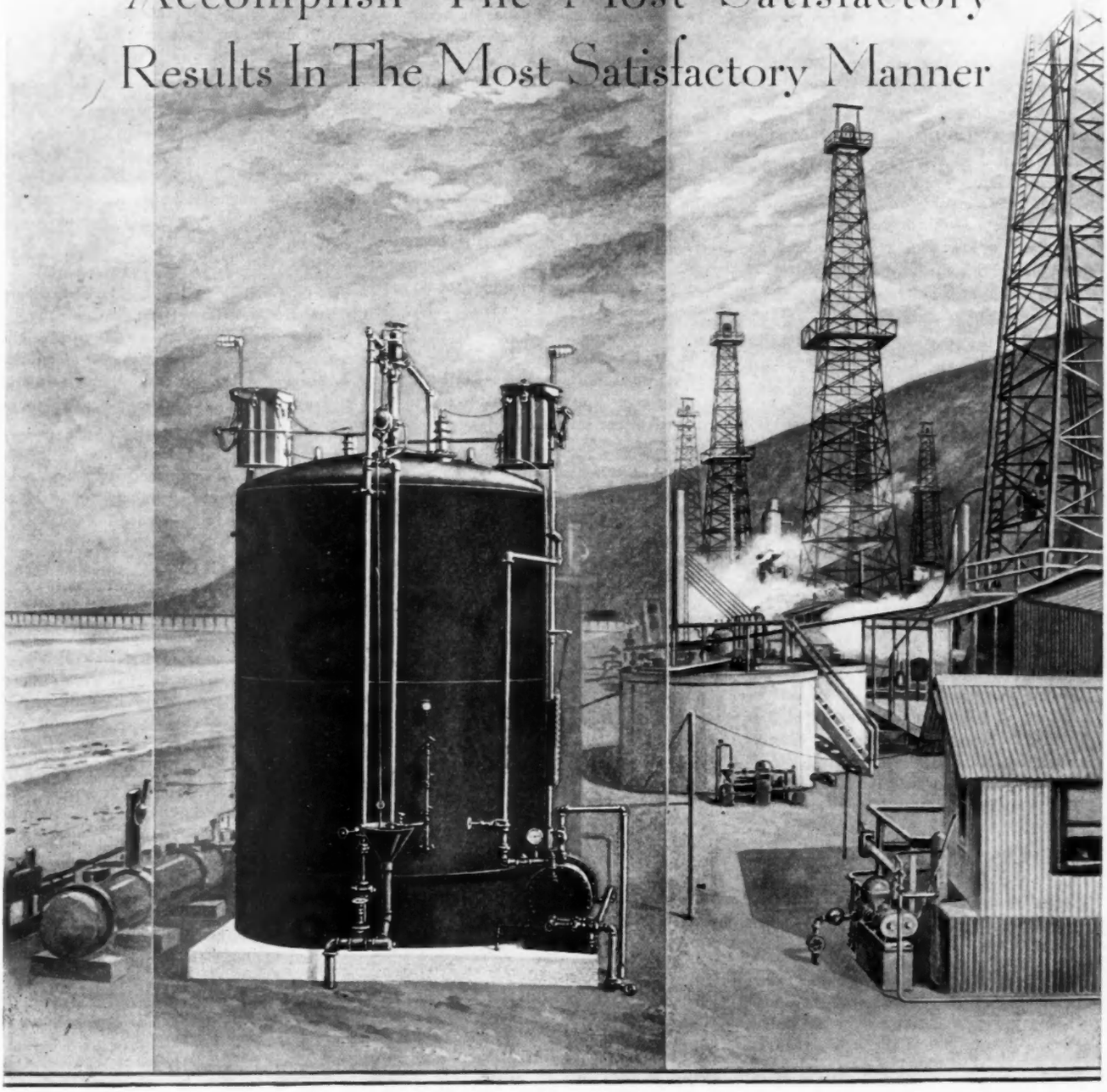

PETRECO

The Electrical Process for Dehydrating Crude Oil Emulsions

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

Security Title Insurance Building., Los Angeles. Branch: Houston, Texas

MEN IN THE INDUSTRY'S NEWS

JOHN S. CRUSE, JR., who has been serving Pure Oil Company as paleontologist in the Gulf Coast district, with headquarters at Houston, has accepted a similar position, effective August 15, with Amerada Petroleum Corporation in its Houston office.

FRANK HOLLOW, discoverer of the Hollow pool in Harvey County, Kansas, and William N. Bartlett, of Bartlett Mortgage Company of St. Joseph, Missouri, have organized Holbart Oil Company. The new firm has announced its first operation which is a wildcat test in eastern Harvey County.

A. J. O'ROURKE, Kansas scout for Skelly Oil Company, has been transferred and will make headquarters in Houston.

FRANK COATS, driller of Oklahoma's first commercial oil well at Bartlesville, died in a Tulsa hospital, Monday, August 7. Coats was born in Pittsburgh, Pennsylvania, followed the oil industry as a youth and came to what is now the Mid-Continent area in 1896. He had not been connected with the industry for the past 13 years due to a shoulder injury.

PETER FERTIG, credited with having drilled the first commercial oil well in Kansas at Louisburg in 1886, died Saturday, August 5, at his home in Cherryvale, Kansas. Fertig was 92 years old at the time of his death and had followed the oil industry almost since its inception.

FRED FRASTED, JR., geologist for Stanolind Oil & Gas Company, has been transferred from Shawnee, Oklahoma, to Casper, Wyoming.

RALPH W. HOWE, vice president and general manager of Atlantic Pipe Line Company with headquarters at Dallas, Texas, visited the Philadelphia general offices of Atlantic Refining Company, the parent organization, during the past week.

BURR McWHIRT, formerly geologist and valuation engineer for Shell Petroleum Corporation, received the degree of bachelor of science in petroleum engineering at Oklahoma University on August 3.

D. A. SUTHERLAND, consulting petroleum technologist, 439 Salisbury House, London, England, is in Palestine.

L. C. (LEW) KLEIN, who has been in charge of the Oil Well Division of American Steel Export Company, Inc., for the past four years, left that company on August 8 to open his own office to act as export agent for a number of manufacturers of oil field equipment. His office will be at Room 601-2, 285 Madison Avenue, New York.

G. B. SHES, petroleum engineer of the U. S. Bureau of Mines, formerly at Washington, has been transferred to the Petroleum Field Office of the bureau at San Francisco, where he will be engaged in production work having to do particularly with the California oil fields.

R. D. BUSH, California Oil & Gas Supervisor, with headquarters in San Francisco, spent several days the past week in the branch office in Los Angeles.

R. E. ALLEN, assistant to the California state oil umpire, left Los Angeles late in July for Tulsa as the California representative of the National Emergency Committee named to work out a curtailment code for the United States, to meet with members of the committee from other states.

WALTER ENGLISH

Geologist for the Superior Oil Company with offices in Los Angeles, who has been made a member of Gen. Hugh S. Johson's NRA staff as technical advisor and who is now in Washington attending hearings in connection with the oil code.

RALPH B. LLOYD, president of Oil Producers Sales Agency of California, and a member of Emergency National Committee on the Oil Industry, has returned to his headquarters at Los Angeles after an extended stay in Washington.

W. A. TROUT, vice president of Emsco Derrick & Equipment Company, returned to Los Angeles August 7 after a trip to Eastern points, and after attending the meeting of oil tool manufacturers at Dallas where a national association was formed.

W. G. COREY and L. C. Harbert, officials of the Rotating Pumper Company, returned to Los Angeles August 5 after spending two weeks in the Mid-Continent surveying the general oil field situation with reference to the potential use of pumping equipment.

J. P. RATIGAN returned last week to Los Angeles after touring the oil fields of Texas and Oklahoma.

FREDERICK G. CLAPP, who has been in Persia advising that government as to its new concession with Anglo-Persian Oil Company, recently completed a motor trip to Meshed in northeastern Persia and thence west across the country to Tabriz and Mosul over previously little traveled roads. He is to return home to New York in August.

D. MILLS HAMMETT, manager Mid-Continent division of Axelson Manufacturing Company, is at Morningside Hospital, Tulsa, where he is recovering from an emergency operation for appendicitis.

STOCKTON D. BROUGHTON, 32, former combination geologist and scout for The California Company in East Texas and later Southwest Texas, died August 5 in a hospital at Tyler, Texas, following a long illness.

PAUL R. MARTIN, chief scout for Pure Oil Company in the Fort Worth division, departed last week with members of his family for an automobile trip to the Middlewest, with the fair at Chicago on the itinerary, and particularly a few big league baseball games.

SIDNEY H. JOHNSON was the speaker before the Houston Geological Society for the August 10 weekly luncheon meeting, the subject being a discussion of the "Greta Area."

Texas Commission *Faces Problem In Establishing* New Allowables

A SUBSTANTIAL cut in the allowable production of the principal oil fields in Texas, which has been averaging above 1,150,000 barrels daily, is an assignment to be drawn by members of the Texas Railroad Commission upon completion of the code to regulate the petroleum industry. Since the code provides that "The required production shall be equitably allocated among the several states by the federal agency" the commission will have a definite production level to attain. Should Texas fail to curb its crude output to the prescribed quota the President is authorized to regulate interstate shipment of crude and refined products from the state to the extent necessary to effectuate the purposes of the National Industrial Recovery Act.

The crude production quota to be assigned Texas is a matter of guess work, but certain to be well under 1,000,000 barrels daily.

An unpleasant task awaits the commission in trimming the state's output at the state-wide hearing to be held on August 21 at Austin as well-organized groups of operators whose properties center on given fields will seek to avoid sharing in the production curb in hopes that the burden may be shifted to other areas. Political influence is certain to be brought into play, as it has in the past.

In the event the commission accepts the production quota assigned Texas as being fair and proceeds to lower the allowables of all important fields so as to conform with same, it is not believed that protesting operators can resist the order with federal court injunctions. One or more producers in the Van, Yates, and East Texas fields have in the past won decisions against the commission in federal court against reducing the production allowable.

Leniency has been shown by the commission in recent months in granting higher production allowables to fields capable of mustering a market outlet for the requested increases. Such has been particularly true in Texas Panhandle, several areas in West Texas, and the Conroe, Barbers Hill, and East Texas fields.

Panhandle

Allowable production of the Panhandle was boosted from 43,500 to 50,000 barrels daily on July 1, and 15 days later authorized to produce up to 60,000 barrels daily. However, the mid-July schedule was made up on a basis of 55,000 barrels daily, giving the 1856 pumping and flowing wells an average of 29.63 barrels daily per well. Gray County's 828 wells are credited with a daily potential of 116,227 barrels, and allowed to produce 36,040 barrels daily, or an average of 43.53 barrels per well. The Panhandle has 880 marginal wells, and their 25,717 barrels daily allowable is exempt from proration. About 15 wells in the Dumas field, Moore County are also exempt from proration by special dispensation, but oil producers near the Hutchinson County line are restricted.

West Texas

Five areas in West Texas are under a systematic proration schedule, Big Lake is limited to 20,000 barrels daily, but in the event of the completion of a big producer in the Ordovician lime zone this maximum is waived until such time that the well can be properly pinched back, while the Grand Falls district, Ward County, is arbitrarily restricted to 75 barrels daily per well by purchasers.

The Yates field has an average yield of 148.53 barrels daily per well while restricted to 60,452 barrels daily. It is one of the few major fields that have refrained from close spacing of wells. Yates has in excess of 16,000 productive acres, bearing 407 wells in the shallow lime for an average density of one well to about 40 acres. The Conroe field in southeast Texas covers an almost similar area, but has drilled more than 500 wells, with development still in progress on a large scale. Among the more important fields in Texas the Conroe area ranks second to the Yates field in average proration allowable per well.

Gulf Coast

In the salt dome country along the Texas Gulf Coast to the south of Conroe the commission has faced serious difficulties in all proration efforts it has made, the Coastal operators having contended all along that the dome fields, particularly those known as the "piercement" type, cannot be placed practicably under blanket restrictions, since each well is said to

(*Continued on page 51*)

Proration Data on Texas-New Mexico Fields As of August 1, 1933

District—	No. Wells	Official Daily Pot'l Production	Maximum Daily Prod. Allowance	Daily Average yield Per Well
WEST TEXAS				
Yates	407	4,499,844	60,452	148.53
Howard-Glasscock	541	106,703	20,000	36.97
Crane-Upton	594	45,719	12,000	20.20
Ector County	77	25,350	7,500	97.40
Hendrick	424	21,847	21,000	49.53
District total	2,043	4,699,463	120,952	59.20
TEXAS PANHANDLE—				
Gray County	828	116,227	36,040	43.53
Hutchinson County	725	23,583	12,265	16.92
Carson County	252	14,693	6,035	23.95
Moore County	8	96	96	12.00
Wheeler County	43	745	564	17.33
District total	1,856	155,344	55,000	29.63
CENTRAL EAST TEXAS—				
East Texas field	10,335	128,500,000	598,500	57.91
Van	383	(*)	52,450	136.95
SOUTH CENTRAL TEXAS—				
Darst Creek	261	133,994	13,000	49.81
Salt Flat	248	6,541	6,500	26.21
TEXAS GULF COAST—				
Barbers Hill	128	**	19,800	154.69
Thompsons	120	**	16,500	137.50
Raccoon Bend	78	**	4,500	57.72
Sugarland	43	**	7,500	174.42
Conroe	511	**	72,685	142.24
Government Wells District	232	**	17,400	75.00
Refugio	106	**	7,000	65.47
High Island	29	**	7,500	258.62
MISCELLANEOUS—				
North Texas District	14,200	....	56,000	4.00
West Central Texas District	7,899	41,953	22,500	2.85
NEW MEXICO—				
Hobbs	198	1,324,489	33,536	169.37
Eunice	10	....	1,000	100.00

*Field has 1,161,299.05 productive acre feet of oil sand above 2500 feet sub-sea.
**Potentials have not been used in prorating Gulf Coast fields.

Arriving at Horsepower Ratings of Gears in Pumping Equipment

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Farrel-Birmingham Company, Buffalo, N. Y.

FOR many years we have collected data and made a continuous study of load ratings. After drawing numerous curves and using much involved formulae we discovered that the problem is really very simple. It is necessary to keep in mind that precision in determining load ratings is utterly impossible and, therefore, it is useless to employ complicated formulae. To explain this more clearly we have to point out that it is seldom possible to determine within 10 or 15 per cent what load the gears will be required to carry. It is also difficult and usually impossible to ascertain the duration of the load or the hours of service. Again, there are unavoidable inaccuracies of mounting and certain variations in the lubricant, which cannot be ascertained.

After a careful study and observation of thousands of gears in service we ascertained that the load carrying capacity of a herringbone pinion is hardly appreciably affected by the number of teeth when the number of teeth lies somewhere between 14 and 34. (Please note when we specify number of teeth we are also specifying the pitch, assuming that the diameter has been chosen.) Further investigation led us to the conclusion that, although the number of teeth within the limits mentioned is not important, it is desirable to choose a number of teeth more or less in proportion to the peripheral velocity. The following is a good guide:

For a velocity of below 500 f.p.m. the number of teeth may be from 14 to 25; between 500 and 1000 f.p.m. the number of teeth should be from 17 to 27; and for velocities higher than 1000 f.p.m. the number of teeth should be from 19 to 35, or in some cases up to 35 teeth.

Choosing the number of teeth in this manner, the velocity factor is taken care of as far as it is possible to do so by the designing engineer. However, we take care of the velocity factor in another way; the higher the speed of the gears, the more accurate we make them.

Fundamentally, the load carrying capacity of a herringbone pinion is in direct proportion to its diameter and face width, provided, of course, that the number of teeth has been chosen as indicated above. In this connection it is desirable to say that the limit of load, in cases where for some particular reason it is desirable to use a larger number of teeth than, say, 33, is equal to what it would be if the number of teeth were 33.

The above consideration led us to the conclusion that the simplest practical method would be to use a tooth factor which is equal to the load carrying capacity per inch of diameter per inch of face width; that is to say, that if we use a pinion one-inch diameter, one-inch face, and assume that it will carry a tooth load of 100 pounds, then a pinion two-inch diameter, one-inch face, would carry 200 pounds. The factor we arrived at after much study and observation of actual working gears was 100 pounds.

There are a great number of gears in operation with a load equivalent to 100 pounds per inch of face width per inch of diameter, in which the pinions are made in approximately 0.5 per cent carbon forged steel and the wheels having approximately 0.3 per cent carbon and 0.7 per cent manganese. These gears, when reasonably well lubricated, will carry the load for 24 hours a day for a period of three to five years without showing serious wear.

Other observations with harder materials give us the data for modifying the unit load carrying capacity and, according to hardness of material and also according to the nature of the work, some extreme examples will be of interest:

Let us first take the gears of an airplane engine—gears which are used to connect the engine to the propeller. Such gears are now regularly used and there are many hundreds in service. They are made, of course, with the greatest degree of precision and with the best materials available. It has been found that when the tooth factor is less than 400 such gears will withstand the duty for an indefinite period. It should be remembered that in this service the load is continuous while the gears are in operation.

Another example of the same kind is gears used for the same purpose in a racing airplane. The unit pressure in this case was 750 pounds and seemed satisfactory.

Another extreme is in a truck transmission where the unit pressure on the low speed gear with full engine torque was 1250 pounds. In a continuous load test the gear only withstood this load for five hours. It should be borne in mind, however, that in actual service a working life of five hours on the gear would probably be more than the aggregate period of load during the whole life of the vehicle.

On the other extreme, we have non-metallic gears, such as rawhide, fibre, micarta, etc., where the tooth loads should be kept between 20 and 40.

Another example, which is a good guide, is gears for driving stone crushers, rolling mills, heavy rubber machinery, etc., in which flywheels are mounted on the pinion shafts where the service is very severe. The unit factor in these gears is found to be best at from 45 to 55.

Considerations as outlined above led us to compile the formula and tables dated January 7, 1930, and attached hereto. It will be seen that we give a horsepower formula:

$$HP = \frac{S \times W \times D^3 \times N \times B \times C}{1260}$$

It will then be noticed that the B factor of this formula is based on the tooth velocity. The values given are in rather coarse steps but the intelligent engineer can usually interpolate values between those given. The C factors are based on the nature of the load, and, of course, they are empirical and should serve only as a guide. They may be interpolated or modified to suit conditions which are not provided for in the table. The S factors refer to the material and may be altered with discretion. They are given to serve as a guide. To explain in more detail, let us refer to the factor S 1.4, which specifies a material for the pinion of 225 to 250 Brinell hardness and a wheel material of cast steel containing 0.4 per cent carbon. In this case a lower carbon cast steel can be used suitably and yet retain the same S factor when the gear ratio is very high.

Referring again to the numbers of teeth, it should be borne in mind that the sum of the number of teeth in any

gear pair should not be less than 60, although in certain special cases, when necessity arises, it may be lowered.

There are certain cases of gear application where the center distance is wide in proportion to the load to be transmitted. In such a case large diameter pinions are essential and because of the relatively small load and pitch, resulting in a number of teeth less than 35, would be too coarse, that is to say, much coarser than necessary or desirable. In such a case a pinion with a large number of teeth, say 50 to 100 teeth, would be used. We would estimate the load carrying capacity of such a pinion to be the same as if it had, say, only 33 teeth. In other words, the maximum load carrying capacity of any pinion is equal to:

$$\frac{33}{DP} \times 100 \times B \times C \times S$$

Referring again to the horsepower formula, given us

$$\frac{Hp = S \times W \times D^2 \times N \times B \times C}{1260}$$

This may be written in a variety of ways to suit the purpose of the designer. As an example:

Let P=Total Tooth Load

$$\text{Then } P = \frac{HP \times 33000}{V} \quad \frac{P.V.}{33000} = HP = \frac{S.W.D.D.N.B.C.}{1260}$$

$$V = D\frac{\pi.N}{12} \qquad D \text{ in inches} \qquad V \text{ in feet per minute.}$$

$$\frac{P.D.\pi.N}{12.33000} = \frac{S.W.D.D.N.B.C.}{1260} = HP$$

$$\frac{P}{W} = \frac{S.D.B.C.12.33000}{1260\ 11}$$

$$\text{or } \frac{P}{W} = S.D.B.C.\ 100$$

$$\text{and } \frac{P}{WD} = S.B.C.\ 100$$

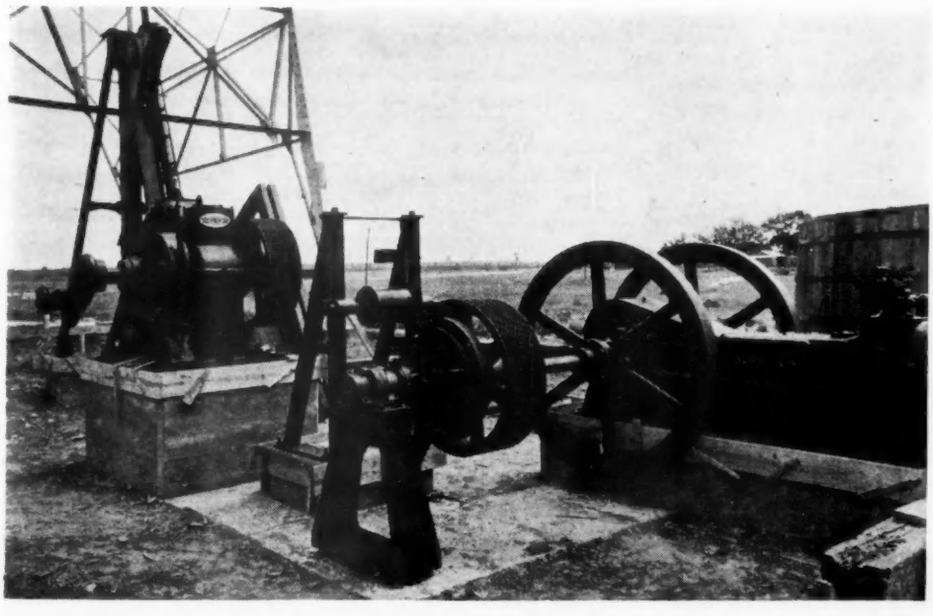
If S, B and C are equal to unity $\frac{P}{WD} = 100$

Our formula, as is the case with all formulae for load transmitting capacity of gears, can be manipulated to give widely varying results but we make no apology for this. It is due to the nature of the problem and apparently cannot be avoided. To illustrate, let us consider the question of gears for machinery for the oil fields. Take the case of an oil line reciprocating pump driven by a Diesel engine. We will take the nominal factor of 100 which may be written as

$$\frac{P}{WD} = 100 \text{ Pounds}$$

To choose the B factor we shall probably find that the velocity lies between 500 and 1000. Let us assume that it is 900 and let us further assume that the gear is well lubricated, that is, at least equal to an enclosed unit, if it is not going to be actually enclosed, then this factor is 1.2. Then, referring to the C factor table, we can assume that the gear will run 24 hours a day full load with shut-downs only for repairs. We can further assume, if we choose, that the load will fluctuate so that it becomes a question of choosing either the .45 factor or the .6 factor. Strictly, according to the table, we can choose the factor .6. Then we have to choose the S factor. It happens that these particular gears are of large size and, accordingly, it is not desirable to select a heat treated alloy material for the pinion. Therefore, it seems desirable to select a straight steel containing from 0.5 to 0.6 per cent carbon. We have the choice of having this oil treated up to a Brinell hardness of 225, which happens to be about the hardness which can be cut with facility in the size required. It is better to assume the material designated 2 P having a maximum hardness of 200 Brinell. Again, for practical purposes, it is desirable to use a high carbon steel wheel casting. In addition to hardness, in this case, we need toughness because a hard wheel is liable to break unless it is exceptionally well annealed and we cannot exactly rely on that so that we shall choose the material designated 1 W. The S factor for these materials will then be 1.1

If we multiply the nominal factor of 100 by the P factor of 1.2 by the factor C, .6 and the S factor 1.1, we shall have 80. This is actually the factor which has been chosen



Notes on Load Transmitted Capacity of Herringbone Gears Having Particular Reference to Formula Dated January 7, 1930.

THE accompanying paper is the second of a series of discussions of horsepower ratings of gears in pumping equipment. The previous article (August 7) presented the angle from the view of the operating engineer, being a part of the discussion brought forth by the American Petroleum Institute's study of the subject. The accompanying article is from the standpoint of the equipment manufacturer.

***The Oil Weekly* invites and will be glad to publish comments from interested readers.**

HORSEPOWER FORMULA

$$HP = \frac{S \times W \times D^2 \times N \times B \times C}{1260}$$

D=Pitch Diameter
W=Face Width
N=R.P.M. of Pinion
HP=Horsepower

To quickly determine approximate Pinion Sizes Assume—W=1.5 x D

$$\text{Then} - D = \sqrt[3]{\frac{HP \times 840}{S \times N \times B \times C}}$$

B=INSTALLATION FACTOR

Types of Installation	Tooth Velocity in Ft., per Minute		
	1000 to 2000	500 to 1000	Under 500
Enclosed Units	1.0	1.2	1.4
Open Gears	.8	1.0	1.2

C=CHARACTER OF LOADS

Character of Loads	Conditions of Service			
	Continuous 24 hr/day	Continuous 10 hrs/day	Intermitt. over 5 hr/day	Intermitt. under 5 hr/day
Full Load Rating with Shutdowns only for Repairs	.45	.60	.80	1.10
Friction Loads to Full Motor Overloads with Frequent Power Fluctuations	.60	.80	1.10	1.50
Friction Loads to Part Full Load Rating, Average Running ¾ Full Load Rating	.80	1.10	1.50	2.00
Friction Loads to Part of Full Load Rating, with greater Service under ½ Full Load Rating	1.10	1.50	2.00	2.70

MATERIAL FACTOR=S

Pinion	Wheel	S	Pinion	Wheel	S
1P	1W	1.0	5P	2W	1.4
2P	1W	1.1	6P	2W	1.5
3P	1W	1.2	7P	2W	1.6
4P	1W	1.3	8P	3W	2.0

for this type of gear and it has been proved in hundreds of installations that it is about right. There are some installations with a factor up to 115, but in such cases the gears have shown a tendency to wear too rapidly.

Now let us assume as a second example a gear drive used for an oil well pumping rig. Such gears are used in most cases as a second reduction, the first reduction being in the form of a V belt drive. In the first place it has to be borne in mind that the V belt drive has an inefficiency which is not known precisely, and therefore the gear will not have to transmit the full horsepower of the motor or the engine. Secondly, the wheel drives a single throw crank and the load is of a pulsating kind. It may be though that a pulsating load is more severe than a continuous load. Sometimes it is but most times it is not. In the case under consideration it is believed that the pulsating nature of the load permits the teeth—where the peak load comes—to get well lubricated between cycles and, therefore, a larger C factor can be used. Due to the gears being for second reduction, the tooth velocity will be approximately 500 f.p.m.; therefore, according to the table, we would choose the B factor 1.2. Then we could safely take the C factor as .6. The S factor needs different consideration to the example last dealt with because this pinion will be relatively small, being between five and six inches diameter; therefore, we can advantageously use the material equal to 5 P, and we would use a wheel material equal to 2W. This gives an S factor of 1.4. However, due to certain practical considerations, it is advisable to use a wheel material having approximately 0.3 per cent carbon and approximately 0.7 per cent manganese; but this material is, for this particular purpose, equal to that designated 2W and, therefore, our S factor will still remain 1.4.

In multiplying these factors it is found that for this class of machinery, using the materials specified, that

$$\frac{P}{W}\text{-factor is approximately 100.}$$

assuming that the second reduction gear will transmit the full rated horsepower of the motor or the engine; but as there will be some inefficiency in the first reduction drive, the actual gear tooth factor will be less than 100; which is desirable with a view to durability.

The foregoing puts the matter in the simplest way we think it can be dealt with. Much more can be written on the subject; the above is for the busy engineer who requires practical and reliable information. In conclusion it is desirable to point out that there are some exceptional cases where the breaking load of gear or pinion should be figured out carefully. One example is in very low speed gearing used for lifting sluce gates, and another in gears for exceptionally heavy duty cranes where the maximum load is only expected to be lifted, say, once a year or less.

STEEL SPECIFICATIONS

PINION STEELS

Number	Material	Brinell
1P	.40 to .50 Carbon	175 to 200
2P	.50 to .60 "	175 to 200
3P	.50 to .60 "	200 to 225
4P	.50 to .60 "	225 to 250
5P	S.A.E. #3240 or Equiv.	225 to 250
6P	" " " "	250 to 275
7P	" " " "	275 to 300
8P	" #2320 Case Hd.	450 to 500

WHEEL STEELS

Number	Material
1W	Approximate .30 Carbon
2W	" .40 "
3W	Special

Pinion	Wheel	S	Price Factor
1P	1W	1.0	1.0
2P	1W	1.1	1.05
3P	1W	1.2	1.15
4P	1W	1.3	1.25
5P	2W	1.4	1.50
6P	2W	1.5	1.75
7P	2W	1.6	2.00
8P	3W	2.0	3.00

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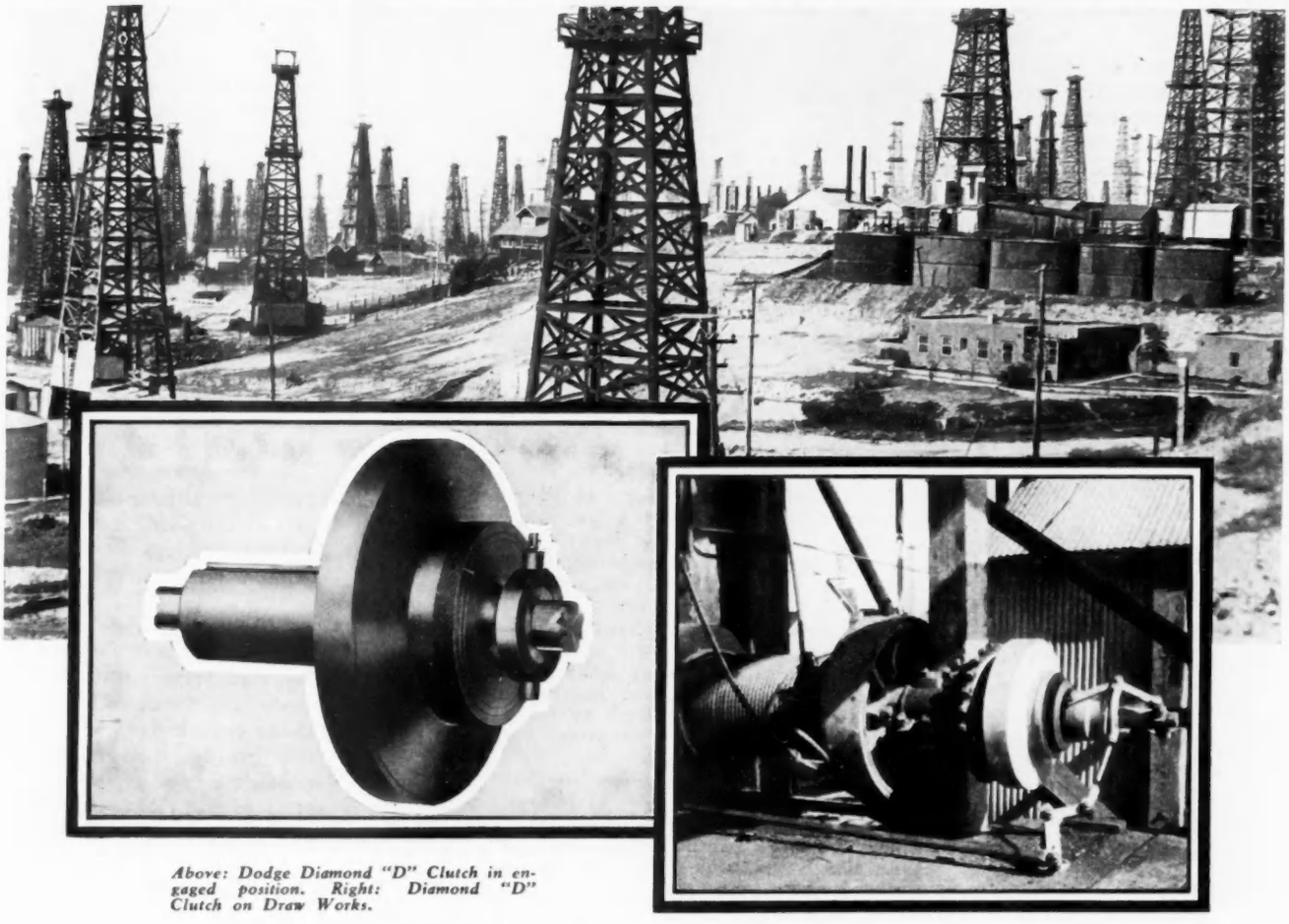

Above: Dodge Diamond "D" Clutch in engaged position. Right: Diamond "D" Clutch on Draw Works.

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The Drilling and Control of

High-Pressure Wells

M. C. SEAMARK
Drilling Engineer, Fields Branch, Anglo-Persian Oil Company

ABSTRACT

THE paper makes no attempt to deal with the normal non-pressure method of drilling but is confined entirely to the control of wells after pressure has been encountered.

***Conditions to be Dealt with.*—A short description of pressures likely to be met with and their relation to the depth at which they are encountered.**

Mentions the assistance to be obtained by the effect of a static column of mud fluid and of the necessity of augmenting this effect by pressure applied at the well-head.

Brings out the possibility of fractured formations rendering the use of mud fluid difficult or impossible.

***Pressure Drilling.* — Describes the mechanical means of closing the annular space between the casing and the drilling tools in order to enable drilling to be carried out with pressure on the well.**

***Cable Tools.*—A description of their use and the advantages resulting from the control of wells drilled by this method.**

***Rig Lay-out for Pressure Rotary Drilling.*—Gives particulars of the cellar lay-out and various reasons for the installations as regards fire, blow-out and ease of operating the equipment. Deals with mud handling pits and circulation.**

***Mud.*—Brings out the necessity of having ample supplies always at hand and describes a method of preparing mud while drilling in non-mud-forming formations. Mentions the advantage of having powdered clay ready for emergencies.**

***Equipment for Rotary Pressure Drilling.*—A description of the various types of blow-out preventers and the advantages of any particular type over another. Deals with snubbing gears and their application, also Kelly cocks and back-pressure valves. Describes how by the use of a special blow-out preventer to fit core barrel or drill collars depths of cellar may be reduced.**

***Well-head Fittings.*—Shows the fittings necessary and their arrangement on the well-head.**

***Surface Equipment.*—Describes the methods of controlling the pressure at the well-head by means of beans and by a pressure settling battery.**

***Scope of Pressure Drilling.*—Gives examples where it is of special importance as regards the elimination of blow-out and advantages to be gained by the use of light muds instead of heavy muds. Mentions the ability to so arrange the effect of a column of fluid that no great differential pressure is exerted at any point in a well.**

Describes methods whereby a well can be completed, even if under pressure.

***Return Flush Method.*—Explains the technique of this method and its application, where conditions are suitable.**

***Fishing.*—A general description of these operations and the arrangement of well-head fittings to cope with them.**

***Tubing of Production Wells under Pressure.*—Gives details of the operations and their scope for carrying out production tests and the obtaining of well pressure data.**

***Safety Measures.*—Describes the various points which require special consideration, position of plant, electrical equipment, gas masks, safety escape gear.**

This paper was read, by title, before the World Petroleum Congress, held at London, England, under auspices of the Institution of Petroleum Technologists, July 18-25, 1933.

THE methods employed for the drilling of oil wells in which comparatively low pressures are encountered have been improved and standardized during recent years to such an extent that it is difficult to visualize any great improvements as far as costs and speed of drilling are concerned, until some entirely new drilling technique is introduced.

The systems in use, both cable and rotary tools, are well known, and excepting a few minor differences in the procedure adopted to suit local conditions of the various operators, the same methods are employed in all the principal oil fields of the world. For this reason it is intended in this paper to deal with some of the difficulties which arise when high-pressure gas, oil or water is encountered, and to describe means whereby drilling can be continued through high-pressure zones and the well completed if necessary as a producer through a flow string of tubing.

Conditions to Be Dealt With

It can be stated as a general rule that the maximum pressure to which gas or liquids encountered in wells is subjected, is controlled either by the static head of water gaining access to the reservoir rock at its point of outcrop or by the weight of the superincumbent formations. Where the pressure in the reservoir rock is due to the weight of a static column of water it will, of course, depend on the specific gravity of this column, and assuming an extreme case where this might be as high as 1.25 a pressure of 542 pounds per square inch would be exerted by each 1000 feet of head.

The controlling factor effecting these pressures, however, is the weight exerted by the superincumbent formations, since if the point of ingress of surface water into the oil reservoir is of sufficient altitude, a pressure greater than that exerted by the overlying strata would be created and fracturing would occur.

Taking a specific gravity of 2.5 as an average of the rocks usually overlying oil-bearing formations, it will be seen that the maximum pressure likely to be encountered is of the order of 1084 pounds per square inch for every 1000 feet of depth, and although pressures of this magnitude are seldom met with, geological conditions which make them possible do exist.

In drilling wells into horizons which carry gas or liquids under high pressures the usual procedure in the past has been to use mud fluids of high specific gravity, the column of which exerts a greater static pressure than that to be drilled into, and while this method fulfills its purpose under certain favorable conditions, circumstances may be such as to render this method not only unsafe but quite impracticable.

Drilling muds of a sufficiently high specific gravity to hold back high pressures have many undesirable characteristics; they usually have to be "weighted" by the addition of weighting materials such as barytes, and although great strides have been made during recent years in the subject of suitable mud fluids, conditions can arise where their use is far from satisfactory and which may result in the complete and permanent mudding off of valuable oil shows.

In limestone fields of high porosity and in formations that are badly fractured and fissured it may even be impossible to keep the well full of

mud fluid, and should this type of formation contain gas or liquid under high pressure and in large quantity, it is obvious that means other than the normal "open hole" method of rotary or cable drilling must be resorted to.

Pressure Drilling

Confronted with such difficulties and often with the desire to drill to possible producing horizons below upper shows of high-pressure gas or water, operators turned their attention to mechanical methods of pressure control, and pressure drilling has become the accepted method by which this end is attained.

Pressure drilling equipments consist essentially of some form of gland fitted to the well-head through which the drilling tools can be operated; in the case of cable tool drilling it may consist of a simple form of head through which the cable can be run and by which a pressure-tight seal may be effected on to the cable while drilling proceeds. In the case of rotary drilling one of the various types of blow-out-preventer is used which enables either flush joint, or normal collar drill pipe, and kelly, to be run into and withdrawn from well under pressure and also enables drilling to proceed while holding the necessary back pressure on the well.

Cable Tools

Although the scope of pressure drilling with cable tools is rather limited, a short description of the gear used and its possibilities may be of assistance to operators whose drilling program does not warrant the use of rotary tools, or where it is desired to run tools such as swabs, bailers or other instruments on a wire line into a well under pressure.

The equipment required consists of a suitable "container" constructed of casing of sufficient length and diameter to house the string of cable-drilling tools. This container is flanged at each end, the lower end being bolted to the well-head on top of a gate valve. At its upper end a stuffing box is arranged through which a polished rod can move vertically with the action of tools. Attached to the upper end of this polished rod is the drilling-in head; this consists of a body fitted with rubber inserts capable of being forced on to the drilling cable by tightening screws and thereby effecting a pressure-tight seal around it.

When running the tools into the well under pressure these rubber inserts must, of course, be loosened to avoid excessive wear due to the passage of the drill cable, and to obviate as far as possible the leak of oil or gas into the atmosphere, an additional fitting, a spray arrester, is attached to the upper end of the drilling-in head. This spray arrester is essentially a tee-shaped fitting with a lightly packed gland at the top which prevents the escape of spray around the drill line when inserting or withdrawing the tools. A flexible hose is attached to the side opening of the tee-piece, and by means of this any oil or gas which escapes past the drilling-in head is led down to a suitable small tank on ground level where it can be disposed of.

With cable tool drilling at pressure around 500 pounds per square inch there is a considerable effort exerted on the area of the polished rod which tends to retard the free falling motion of the drilling tools, and in order to compensate this retarding action as far as possible a polished rod balance is a very desirable addition.

By the use of this method cable tool drilling has been carried on against pressures up to 750 pounds per square inch with no loss of oil while actually drilling, and with the escape from the well to the tank of a negligible quantity of about 50 gallons, while running in or withdrawing the tools. With this system the walking beam cannot be used and spudding must be resorted to.

The system is simple, easily operated and requires no expensive structural alterations to the normal cable tool outfit; its use also ensures against the tools being lifted off bottom by the sudden inrush of oil and gas when encountered, with the attendant risk of the loss of the tools should the line break.

In cases where the oil can be handled as produced the well can be allowed to flow while drilling proceeds, the outward flow of oil bringing the cuttings to surface and so avoiding the need for bailing. Should bailing be necessary, the bailer is run in through a separate container using the

Concrete-filled joints of large diameter casing is used for derrick foundations by Khanaquin Oil Company in the Naft Khaneh District, Iraq, Persia.

same method as that employed when running the drilling tools.

Rig Lay-out for Pressure Rotary Drilling

The use of the rotary pressure drilling system involves a more elaborate lay-out of rig foundations and cellar construction than a normal non-pressure rotary well, and due consideration should be given to these items before any plant erection is commenced.

This question has been studied in great detail by Anglo-Persian Oil Company, and a type of cellar has been evolved in Persia which meets all conditions so far required in their operations. It will be seen on reference to the drawings of this cellar lay-out that wherever possible a side-hill site is chosen. The method allows two open sides to the cellar and provides means whereby the cellar can, if necessary, be flooded with water in case of fire, at the same time allowing ample drainage for any oil or water that might otherwise collect around the well-head. Access to the cellar floor is by a roadway cut along the hill-side, allowing the delivery of heavy material at the cellar floor level if necessary.

Below the concrete mat of the sub-cellar floor heavy **H** beams are embedded in the form of a square. These **H** beams provide anchorage at a variable pitch circle and enable anchor bolts to be attached to any part of the well-head in correct alignment.

The derrick floor is supported on a frame consisting of eight-inch or 10-inch pipes suitably braced and providing supports for platforms around the well-head at any convenient height.

Provision is made for long-distance control handles which are supported on steel posts placed in one of the cellar side entrances, and all valves on the well-head can be operated at a safe distance from the well-head.

Mud pits of special construction and of a capacity to ensure an ample supply of mud fluid are arranged if possible along the contour of the hill-side. These tanks are arranged in series so that a gravity feed will convey the mud from the uppermost pit through the whole series and to the slush pumps which have a flooded suction. To insure a supply of well-conditioned mud at all times a separate mud circulation pump is employed, the function of which is to recirculate the mud at surface whenever necessary.

As a further precaution the main slush pumps are installed at a considerable distance from the well-head so that in case of emergency they can still be operated.

Mud

When great depths of non-mud-forming formations are to be drilled through, the question of the manufacture of large quantities of well-matured mud fluid becomes of vital importance, and although the loss due to circulation may not be high in tight formations, the possibility of very high losses in creviced strata must be prepared for. A very satisfactory method for the manufacture of mud is by the use of the ordinary edge runner mill fitted with rotary rollers and stationary pan. A mill with a pan of five-six feet diameter and driven by a 6 horsepower engine will mix mud of 1.2 S.G. at the rate of 2400 cubic feet in 24 hours. These mills can be fitted with an automatic feeding device from a hopper, and by this arrangement one man can handle the equipment.

A further advantage of this type of mud mill is that good mud-forming rock can often be quarried near the site; and although they can be broken down by sufficient weathering, they can be reduced to a mud fluid in a much shorter time by the grinding and mixing action of the rotating rollers.

The clays can also be ground dry if required and stored in this powder form for the preparation of mud fluid by the hopper-mixing method. This latter scheme allows large quantities of mud to be made up as required without the need for extra tanks for the storage of mud fluid, and all difficulties from settlings and the resultant need for continuous agitation are avoided.

The above described rig lay-out may appear to be unduly elaborate, but the cost and time involved in its installation will be well repaid in the drilling of wells where high pressure in fissured formations is likely to be encountered and where drilling must continue below such shows.

Equipment for Rotary Pressure Drilling

The chief items of equipment required in addition to the normal non-pressure rotary equipment consist of blow-out preventers, snubbing gear and clamps, back-pressure valves for the drill pipe, and a kelly cock.

A brief description of the various types of these tools will enable some idea to be formed as to what operations can be carried out under various conditions and what difficulties can be overcome by their use.

Blow-out preventers can be divided roughly into two main groups, those suitable for drilling through and those whose only function is to effect a seal against the drilling string while in a stationary position; for the purpose of this paper only those which permit both the insertion and withdrawal of the drill pipe and actual drilling under pressure will be considered.

The latter cover three general types:

(A) A series of glands one above the other, packed with a suitable gland packing and capable of being adjusted for wear by the tightening of nuts or gland rings.

(B) A type in which the well pressure is utilized to move a piston and so force a rubber sleeve into a cone-shaped casing thereby contracting the sleeve on to the drill pipe.

(C) A hydraulically operated type which effects a pack-off to drill pipe coupling or square kelly by the application of pressure applied on the outside of a massive rubber sleeve.

Type (A) is confined entirely to the use of flush-joint drill pipe. Its design does not allow of much irregularity or variation in the diameter or circular forms of the drill pipe, and since a good deal of friction must arise between the rotating drill pipe and the stationary packing considerable wear takes place when drilling against high pressures. The design, however, allows one of the glands to be in use at a time, and as this packing wears out the other glands are brought into use.

Type (B) is automatic to a certain extent by virtue of a movable piston which is operated by the well pressure. Here again the design allows only pipe of a uniform outside diameter to be used, and as the rubber packing does not rotate with the drill pipe a considerable amount of friction takes place between them while drilling.

Type (C) is arranged to operate by hydraulic pressure developed by a small weight-loaded accumulator, or by pressure from the slush pumps, steam supply or a small hand pump. When used with the hydraulic accumulator this blow-out preventer will pack off securely to a various range of sizes and shapes, i. e. bare pipe, tool joints, and

square kelly, and will allow the drill pipe to be run in and withdrawn and drilling to be carried out, if necessary, with ordinary collar drill pipe.

The rubber sleeve which is mounted on ball-bearing races rotates positively with the kelly, and no wear takes place on the sleeve due to rotation of the drill string.

The design of this blow-out preventer also provides for a certain amount of lateral movement and flexibility which relieves the well-head fittings of the strains set up by the table being slightly out of alignment or due to a bent kelly.

A static or non-rotating type is also made which embodies the same principle of operation but does not provide for lateral movement or rotation. This latter type is particularly useful for running casing or tubing through and also enables casing to be cemented under pressure.

These hydraulic blow-out preventers can be brought into operation instantaneously by the opening of a cock placed close to the driller's working position, or alternatively the cock can be operated by means of control wires running to a safe distance from the rig.

Another piece of equipment essential to pressure drilling is snubbing gear, and various types are used for this operation.

The simplest form is probably that which uses a wire line running through a series of snatch-blocks, the free end of the line being attached to a winding drum; this method is too well known to need further description.

Its use is limited to fairly light loads, but as it can be made up from material usually on site, the method is often used for jobs of short duration and where the work entailed does not justify the expense of the more powerful gears.

Another type of snubbing gear consists of a cylinder inside which is a hollow ram or piston fitted with dogs is operated by gas or liquid under pressure. The cylinder is secured to the well-head or other suitable anchorage, and on the application or release of pressure inside the cylinder the ram is forced downward or allowed to travel upwards, forcing the drill pipe into the well, or allowing the pressure to expel the drill pipe, under the control of the snubbing gear. With this type the travel of the drill at each stroke is limited by the length of the cylinder which is generally about six feet long. The design also necessitates the drill-pipe stands being raised high enough in the derrick to permit their being lowered through the hollow ram, after which they are tongued up in the usual way.

A later type of hydraulic snubbing gear consists of a cylinder and ram about 12 feet long which can be anchored on ground level. It operates by pressure from the slush pumps, and as the ram travels outwards the movement is transmitted through two heavy chains to an automatic clamp on the drill pipe. By this method the derrick floor is left clear and snubbing can be carried out if necessary at a stroke of 24 feet. The drill pipe is coupled up in the normal way and the only gear above the derrick floor consists of the two traveling chains and the snubbing clamps.

By the use of one of the types of hydraulic rotary tables no other snubbing gear is required, but since snubbing seldom becomes necessary until the well has reached a considerable depth, the cost of installing a hydraulic rotary table for the purpose of snubbing work is often unjustified. Their use as a feed control for the drilling bit is a separate question, but as the equipment required for rotary pressure drilling already calls for a very deep cellar, the extra depth of cellar necessitated by the use of a hydraulic rotary table should not be overlooked.

No matter what type of snubbing gear is employed, a set of stationary catch clamps must be fitted below the main

Houseboat used in operations of Venezuela Gulf Oil Company in Eastern Venezuela. In the background is the company's tanker, "Boliver," alongside the barge "Homestead."

travelling snubbing clamps in order that the drill pipe may be held stationary while a fresh hold is being taken by the travelling clamps.

The back-pressure valve for the drill pipe and the kelly cock require no description. The object of the former is to prevent any passage of fluid or gas up the drill pipe, and one must be fitted, preferably immediately above the drilling bit, to enable the drill string to be run into the well under pressure. A second may be fitted at the upper end of the drill collar to give additional safety should the lower one fail to shut effectively.

The object of the kelly cock is to close the upper end of the kelly in case of the failure of any part of the gear on the pump side of this cock; it also enables a "container" to be fitted in order to allow the introduction into the well of various testing instruments in connection with well data or fishing.

Well-head Fittings and Arrangement

These depend very largely on:

(*a*) the pressure to be drilled against;

(*b*) the diversity of the operations anticipated, *i.e.* whether coring is to be carried out or whether provision is to be made against possible fishing jobs, and

(*c*) the degree of insurance to be provided by the duplication of the various fittings to provide against possible failure at a critical moment.

A well-head arrangement which provides a good margin of safety and some flexibility as regards fishing is shown on the diagram (lantern slide). Here a Shaffer, Cameron or other type "full opening" blow-out preventer is placed immediately above the main control valve. It is used only in the event of a pack-off being required on the drill pipe, and in normal pressure drilling should be required only to enable repairs or replacements to be made to any equipment placed above it.

To this Shaffer or Cameron type of blow-out preventer is attached a container of a length sufficient to house the drilling bit and drill collar. Above this container some form of cross or tee is fitted to provide an outlet for the drilling mud flush. Attached to this tee is a hydraulic blow-out preventer of the rotating-oscillating type which will pack off to the drill pipe and kelly. With this arrangement all normal drilling operations can be carried out and an effective pressure-tight seal is provided while drilling and handling the drill pipe.

If coring is to be done or should it be desired to run a long and heavy drill collar immediately above the drilling bit, the container can be dispensed with and a static type of hydraulic blow-out preventer fitted with a sleeve to pack off to the core barrel should be fitted in its place. By the latter arrangement the depth of the well cellar can be reduced considerably, since the upper blow-out preventer only is in operation while drilling and running or pulling the pipe. When the core barrel or drill collar reaches this upper blow-out preventer the lower one is brought into play on to the core barrel and the upper one is released. Any length of core barrel or drill collar can then be withdrawn until the drilling bit is above the main valve, which is then closed before removing the bit from the well-head.

Surface Equipment

This again depends upon the pressure to be drilled against and on the percentage of safety margin desired in the equipment. For pressures up to, say 500 pounds per square inch on the well-head it may be necessary to install only some suitable "beaning" arrangement on the well outlet by which the flush return can be controlled in relation to the pump input, and so maintain the necessary pressure on the well-head.

For higher pressures, however, an enclosed system of flush return may be necessary in order to reduce the load on the slush pumps. The usual method employed for this purpose is the installation of a series of pressure tight pipes through which the flush return is passed. During its flow through these pipes the cuttings are deposited (as in the open flume method of settling) and the separated mud is picked up by the slush pumps at practically the same pressure as that at which it left the well-head.

For convenience, the settling system can be duplicated so that one battery is always available while the other is being cleared of cuttings.

The Scope of Pressure Drilling

In dealing with this section it should be emphasized that pressure drilling in its present stage involves certain risks which are inseparable from the controlling of high-pressure oil, gas or water. The use of the equipment already described does, however, reduce the risks considerably, since it can be used in conjunction with the normal weighted mud control method for holding back high pressures, if conditions are such that the use of weighted mud is advisable or even possible.

There are undoubtedly many objections to the use of heavy mud fluids, especially when drilling for considerable periods through oil-bearing sands on limestones. The chief objection is probably the tendency of the mud to seal-off oil shows, and an actual example has been recorded of an oil show of a capacity of 800,000 gallons per day having been reduced by 50 per cent due entirely to the mudding-off effect of mud fluid.

Another disadvantage of the use of artificially weighted muds is the cost of the weighting agents, and, in the case of many foreign fields, the additional cost of shipment and the time taken to obtain supplies is of great importance.

It will be admitted that if high pressures are to be controlled a pressure at least equal to that encountered in the well will be required to counterbalance them. This counterbalance pressure can be provided by:

(A) The static pressure exerted by a column of fluid, or

(B) The static pressure exerted by a column of fluid plus any additional pressure that may be applied at the top of this column of fluid.

With this latter combination, therefore, considerable latitude is provided, since the specific gravity of the fluid column can be reduced without reducing the effective pressure exerted at the bottom of the well. It is only by pressure drilling that full advantage can be taken of a combination of (A) and (B), and so enable the best results to be obtained under the varying conditions encountered in drilling through high pressures.

Research work carried out during recent years on drilling muds has provided very valuable information regarding the best type of mud to be employed, but drilling conditions may vary to such an extent that an ideal mud for all purposes is extremely difficult to obtain. If a mud is sufficiently heavy to hold back high pressures it may be liable to gas cuttings, while if of too low a specific gravity the pressures encountered may be higher than the static pressure exerted by the height of the column. Either conditions may lead to a serious blow-out unless some provision is made at the well-head to cope with such emergency, and

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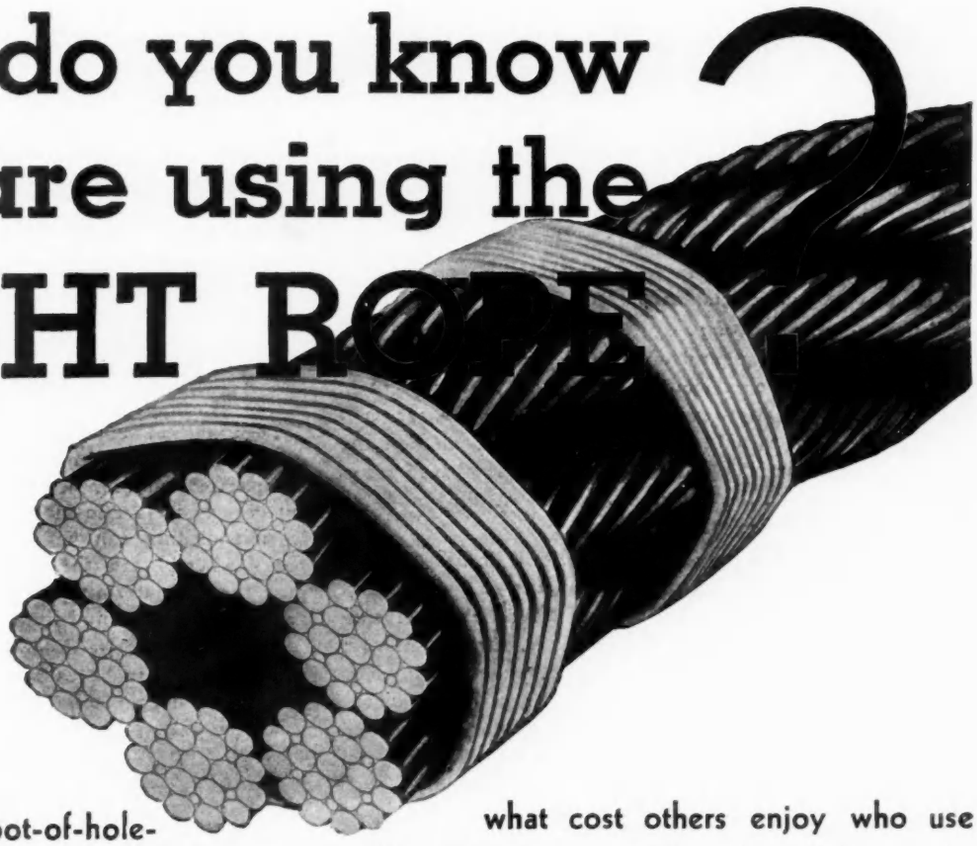

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pressure drilling is so far the only method known to combat this difficulty.

Apart from the safety factor provided by the use of blow-out preventers, the pressure drilling system can be applied to overcome many other difficulties. By its installation high-pressure water shows can be mudded-off as drilling proceeds, flowing muds can be held back and oil and gas shows, the pressure of which can only be estimated, can be drilled into under conditions by which their presence is indicated by a loss of pressure at the well-head instead of a dangerous rise in pressure.

By the application of pressure at the well-head the specific gravity of the column of drilling mud can be reduced so that the pressure exerted by the column at any point in the well corresponds very closely with the pressure encountered in the formation, and since by this method the differential pressure is reduced to a minimum, difficulties such as lost circulation or dilution of the drilling mud can be overcome to a very large extent.

Where conditions are such that it is desirable to complete a well to the producing stage with the well at all times under control, the use of pressure drilling and control equipment enables all operations to be carried out with a minimum amount of risk. Provided the well is deep enough and the pressure encountered is not too great, the production zone can be drilled into, casing can be run and cemented, and if necessary the well can be tubed and brought on to production without the use of weighted mud; but in cases where the pressure at the well-head exceeds the pressure that can be safely controlled by the blow-out preventer a heavier mud must, of course, be used to provide some additional pressure at the bottom of the well.

A short description of the methods employed in completing a well under pressure conditions may be useful. For an example we will assume a well is to be completed with six-inch casing as an oil string, this casing being run inside 10-inch casing.

Before running the 10-inch casing a special long collar with suitable annular serrations machined on the inside bore is fitted on the casing, say 100 feet up from the lower end of the string. This collar is really a float collar without the cement filling and valve. The casing is run and cemented in the normal way, care being taken that during cementing the cement does not set up to this special collar.

Drilling is continued in the normal way, with pressure drilling equipment installed in cases where the depth of the expected oil show is unknown. The oil show can thus be drilled into under pressure and the drilling string withdrawn from the well. A cementing basket is then run on a string of cementing tubing and a plug of cement placed at the special collar already in position in the 10-inch casing. After the cement is set the pressure in the upper part of the well is bled off ready for running the six-inch casing. This string is also fitted with a special coupling at the upper end of the first or second joint from bottom.

With no pressure on the well above the cement plug in the 10-inch casing the six-inch casing can be run to a point immediately above this plug.

An external blow-out preventer is fitted to the 10-inch fittings at the well-head and with this packed off to the six-inch casing the cement plug in the 10-inch casing is drilled out, and if necessary under-reamed, through the six-inch casing, a blow-out preventer of course being in use on the six-inch casing. The internal plug is now placed in position in the special collar in the six-inch casing, plugging it at its lower end. The balance of this casing is then run to bottom, the internal plug is removed by being fished out and the casing is cemented under pressure.

Return Flush Method

Experiments are being carried out with a view to improving the technique of the reverse circulation method of rotary drilling, and in cases where an oil-bearing formation has to be penetrated to considerable depths the method appears to offer many advantages over the normal method of pumping the mud flush down the drill pipe with the returns coming up the annular space between the drill pipe and casing.

The employment of this reversed flush method entails the handling of the oil as it flows from the well, and it must, therefore, be stored or disposed of as produced.

The method consists essentially of pressure drilling equipment as already described, except that no slush pumps are required, since the flow of the well carries the cuttings to surface inside the drill pipe. Its chief advantage is that drilling can be continued through badly fissured rocks where, with the normal method, mud fluid losses into the formation would be considerable, whereas with reversed flush no mud fluid is used.

Assuming a zone of high productivity has been struck and drilling is to be carried on through a barren zone to search for deeper oil, this production can be utilized to bring the cuttings to surface. A special valve which allows the drill pipe to be run into or withdrawn from the well is fitted immediately above the drilling bit, and since no outlet is provided in the annular space between the casing and drill pipe, the oil is forced to travel downwards from the production zone, through the flush holes in the drilling bit and so up the drill pipe to the surface.

There appears to be no insuperable difficulty in this method even if coring becomes necessary, provided the formation is not liable to cave, and even should this occur the risk of freezing the drill pipe is lessened, since normal circulation can be reverted to if necessary. The use of this method is dependent entirely on the pressures encountered, and as no mud fluid is used to assist in holding back the oil flow, the controlling factor as regards pressure is that to which blow-out preventers can be relied upon to effect a pressure-tight seal at the well-head while drilling and running the drill pipe.

Fishing Under Pressure

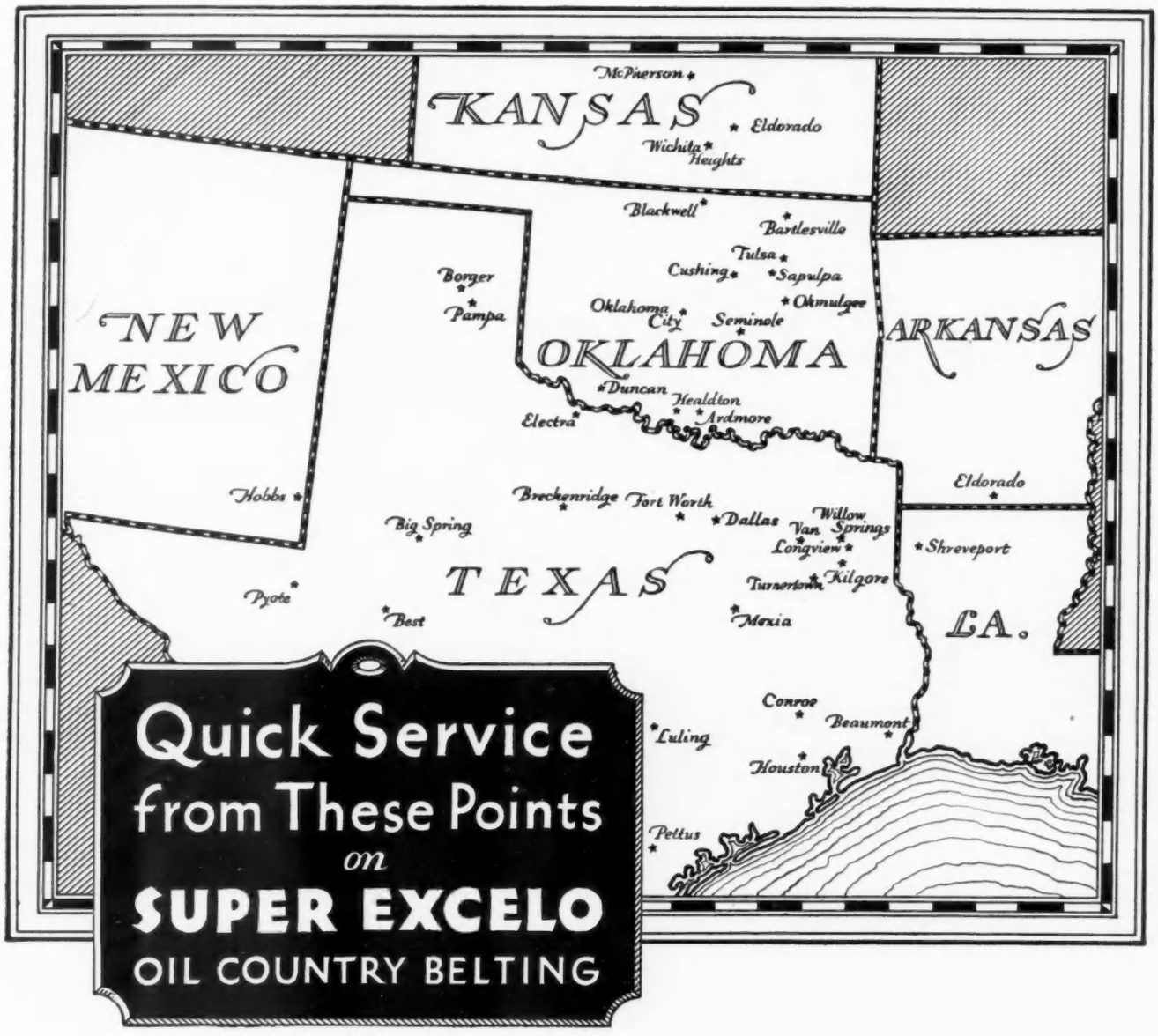
The question of fishing under pressure is one regarding which little actual experience appears to be available. Schemes have been prepared which provide means whereby all normal fishing operations should be possible.

The chief difficulties are found in plugging the lower end of the upper part of the drill pipe in case of a twist-off, and in handling drill pipe which has become bent. For the former condition various registering devices have been suggested and manufactured, and for the latter condition the use of a container of a suitable length to house the bent pipe has been designed.

With good supervision, a carefully arranged program and the necessary equipment, the difficulties connected with fishing under pressure, although not easily overcome, need not outweigh the advantages which pressure drilling offers in other ways.

Tubing of Production Wells Under Pressure

A considerable amount of progress has been made in the tubing of wells under pressure since the advent of pressure control equipment, and normal collar tubing can now be



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run into wells without the need of "killing" the well by water or mud flush.

The equipment consists of blow-out preventers to effect a seal on the outside of the tubing and some form of disc or mechanical plug to prevent pressure escaping up inside the tubing.

If the gate or ram type of blow-out preventer is used, two are necessary in order that the upper one may be closed against the tubing while a collar is passing through the lower gate, the lower gate then being closed above the collar and the upper gate opened; this method is necessarily rather slow because of the frequent operation of the blow-out preventers. With a hydraulically operated type the collar tubing can be passed through the blow-out preventer owing to the elasticity of the pressure-loaded rubber sleeve, and speeds closely approaching that attained by the use of flush joint tubing can be made.

A special inside tubing plug is also in use and has proved to be extremely efficient for plugging the inside of the tubing. This plug has a great advantage over the disc method in that it can be re-run any number of times and can be easily placed in position to enable the tubing to be withdrawn.

A modification of this method which employs both an outside blow-out preventer and an inside tubing plug has been designed (but up to the present not tested), by which it appears possible to insert and withdraw any length of perforated liner without "killing" the well.

The use of this tubing plug also enables bottom-hole tests to be carried out under pressure and allows beans of varying sizes to be placed at prearranged positions in the tubing.

Safety Measures

The importance of this section depends very largely on the pressures likely to be encountered and on the toxic effects of the gas; it therefore describes equipment designed to meet extremes under both conditions.

Mud.—As stated earlier in this paper, provision should be made for the manufacture and storage of mud in quantity sufficient to meet all reasonable requirements at short notice.

Slush Pumps.—These should for preference be placed at a considerable distance from the well, out of any natural drainage channel from it, but slightly lower than the well-head. They should also be, if possible to arrange, in the line of vision of the driller from the derrick floor.

Boilers.—The selection of the site should be carefully chosen. It should be on high ground, up wind of the rig according to the prevailing wind, and as far from the well as is reasonably convenient. A steam snuffing arrangement should be fitted to each fire-box, the valve of the snuffer being connected by a light steel cable to a point at the driller's position on the derrick floor, and if considered necessary to any other point which would always be easy of access. By this arrangement the boiler fires can be extinguished at the will of the driller on the first sign of danger.

Electric Wiring.—There is always a risk attached to this, and wherever possible pressure drilling should be carried on by daylight. The safest method of wiring appears to be that in which all main leads in the vicinity of the well are carried through ducts. Old casing of, say, six-inch diameter is very suitable for this purpose, and if these are installed about two feet below ground level before erection commences, very good protection is provided as regards lines at ground level.

Four or more bulk-head type of lights should be built into

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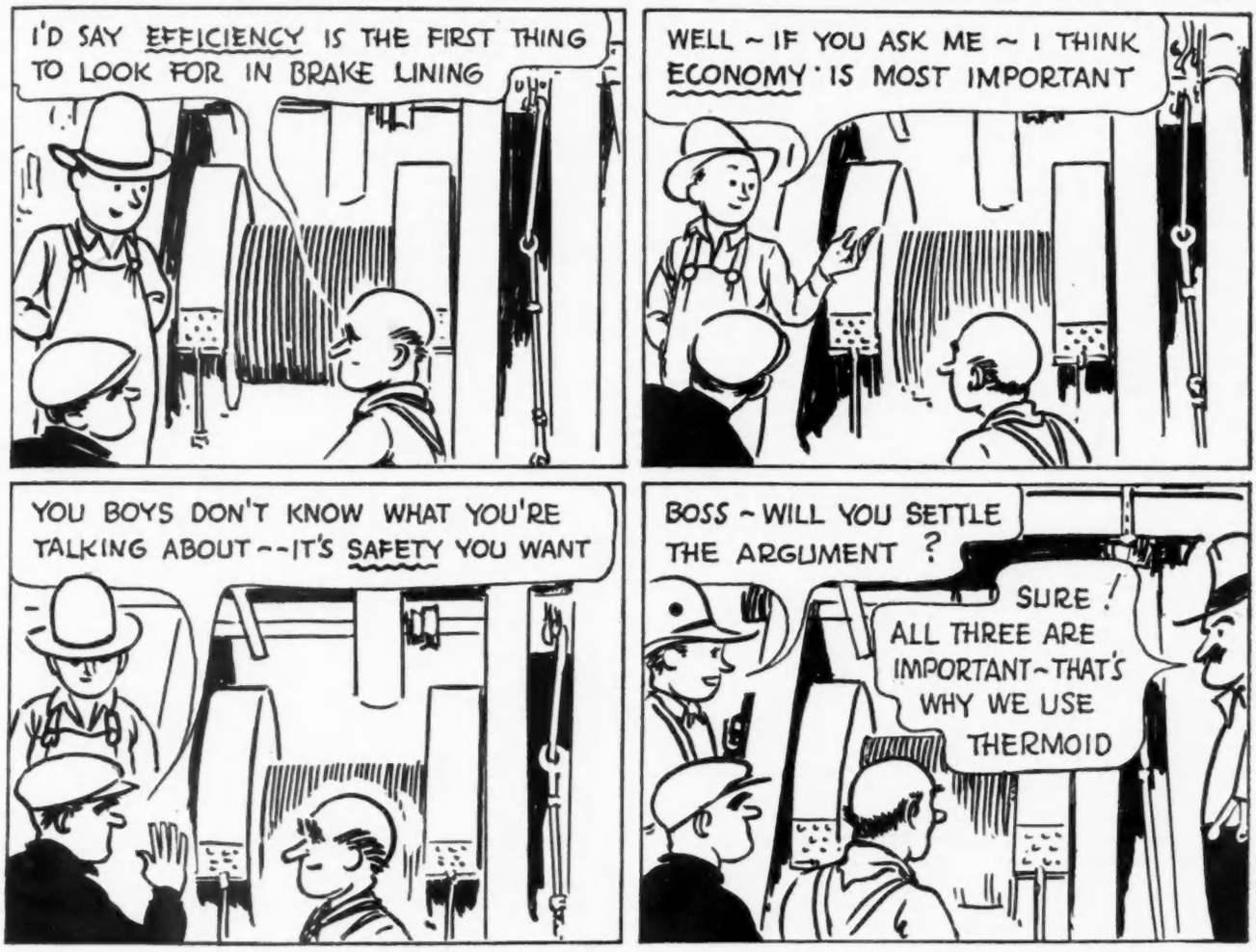
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the cellar walls under flush with the masonry, thus affording protection when work is being carried on in the cellar.

Owing to the difficulty of lighting the derrick efficiently it is almost essential to fit lamps at suitable points in the derrick; this wiring should be all in conduit so suspended as to avoid all possible vibration and chaffing of the wiring.

A master swith by which all power can be cut off should be provided at a point removed from the rig.

The question of flood-lighting the derrick from powerful lamps at ground level, fixed some distance from the derrick, appears to be very attractive, and provided the difficulties of shadows can be overcome, this method would provide by far the greatest safeguard from fire risks.

All lamps should be of the flame-proof type, preferably fitted with Pilkington glass fronts and suitably protected by strong iron-glass protection.

Gas Masks.—A supply of these should be kept in an accessible place in the derrick and a further supply at some distance from the well. The type of mask will depend on the toxic properties of the gas, and although one of the absorbent-canister types may be useful in cases of very low concentrations, the safest kind for all purposes is that which employs an oxygen cylinder with complete face mask. Routine tests should be carried out by all the personnel employed at the well to insure the masks being in usable condition and to enable the men to become proficient in their use.

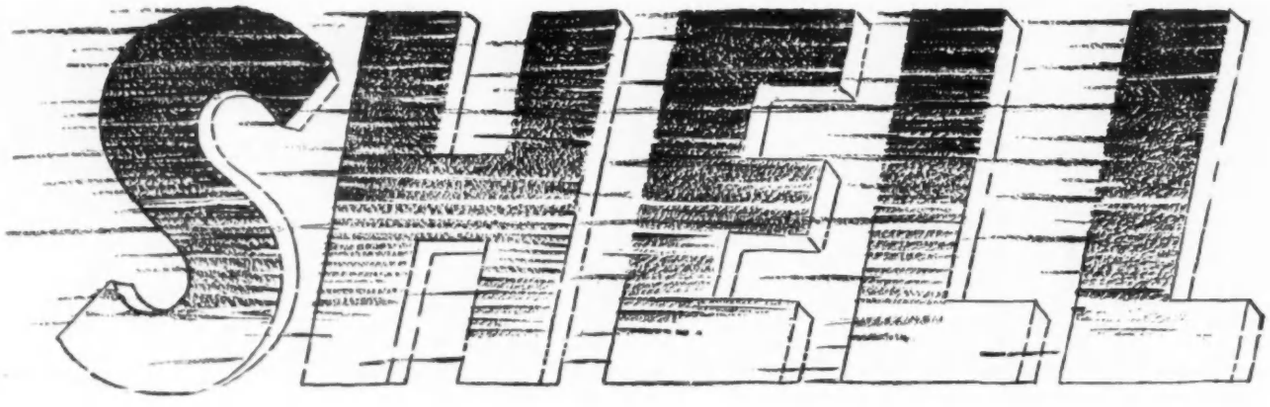
Distant Controls for Valves.—All valves should be fitted with these and the controls should lead to accessible places. Plain instruction should be placed at each control, stating the duty of the valve, the direction to shut and to open, and with heavy valves the number of turns of the handle required to close it. On large main valves it is an advantage to fit a suitable indicator—which can be seen from the derrick floor—by which the driller can tell at a glance the exact position of the gate in the valve.

Telephone.—If the well is on the telephone to a main center the instrument at the well should be fitted at a safe distance, so that in the event of a blow-out access to the instrument is always possible.

Wind Indicator.—Some form of indicator should be fixed at a point visible from the derrick in order that the direction of the wind can be known at all times.

Safety Boxes.—Some form of escape box should be fitted to allow men to get quickly to the ground in case of emergency. A very suitable and efficient type consists of two wire lines of 5/8-inch or 3/4-inch diameter attached to the railing of the fourble board platform and extending to dead men below ground. The angle of these lines should be 24° with the horizontal. On each of these lines a light wooden or metal box is slung on small wheels. These boxes are further connected to each other by a light steel cable running through sheaves at ground level and others at the fourble board platform. By this arrangement the weight of one man coming down will take the empty box to the fourble board, thus insuring that one box is always ready for use. A light brake rod is fitted to the upper part of the box, and by its use the occupant can control his speed of descent. The brake should be fitted with a shoe of some non-sparking material, and the boxes should be large enough to accommodate two men; this allows an unconscious man to be brought down without the necessity of his rescuer having to wait for the return trip of the box.

The writer wishes to express his thanks to the chairman and directors of Anglo-Persian Oil Company for their permission to write this paper and for the assistance they have provided in allowing the results of various experiments carried out to be published.



MARKETS — STATISTICS

Oklahoma City leader in production rise which sends output up 112,000 barrels for the week. No change in general crude price situation; gasoline some better.

U. S. Output Mounts on Eve of Federal Control

EVIDENTLY as a farewell gesture oil production was stepped up 112,000 barrels daily for the week ending August 12. Next week committees of the industry must reassemble in Washington for consideration of another code and advance information is to the effect that its cardinal principle will be control of oil field output. With that in prospect producers took advantage of what seemed to be a last opportunity.

What may be termed the official output was fixed at 2,785,440 barrels daily against an average of 2,673,210 for the week previous. Recognition of another 35,000 barrels of excess output in East Texas brings the daily average to 2,820,440 barrels.

Oklahoma City won the honors on the score of increased output, as its daily average was stepped up to 324,790 barrels. For the week previous it was only 236,440 barrels.

Other flush areas contributed increases of lesser consequence. The Oklahoma daily output rose to 664,030 barrels, its increase over 582,190 barrels being measured by the jump at Oklahoma City.

Kansas put a 3000 barrels increase into the scales and passed the 130,000-barrel daily average figure.

California went above the half million barrel mark with 507,000 barrels as the daily average, an increase of 14,500 barrels.

Texas held fairly close to its recent output as its 1,189,750 barrels was an increase of but 9000 barrels daily. Of this East Texas accounted for 7000 barrels.

Mid-Continent Market Uncertain But Picking Up

REPORTS late in the week indicated that the Mid-Continent market was showing a slight pick up after prices on refined gasoline had dropped an average of a quarter to a half-cent earlier. Except for movement under contract the market was practically at a standstill during most of the week and the open market was said to be slower than it has been in several years. Optimism based on possible improvement under the National Recovery Act gradually had waned as conferees in Washington failed to reach an agreement on the code. Marketers are vitally interested in the price angle in the code and conditions are not expected to improve until something definite has been done in regard to this factor. It was believed by several leaders that upon return of conferees to Washington an agreement would be reached and that some sort of price control measures would be included.

THE OIL WEEKLY

Estimated Average Daily Production of Crude Oil, in Barrels

District or State	Week Ending Aug. 12	Aug. 5
TEXAS—		
Texas Panhandle	56,700	55,600
North and West Central Texas	69,950	69,750
West Texas	165,100	161,825
East Central Texas	58,000	58,000
East Texas Field	*582,000	*575,000
South Texas	47,000	47,000
Total Texas outside Gulf Coast	978,750	967,175
Texas Gulf Coast	208,000	210,000
Total Texas	1,186,750	1,177,175
OKLAHOMA—		
Oklahoma City	324,790	236,440
Seminole Area	153,340	156,400
Others	185,900	189,350
Total Oklahoma	664,030	582,190
KANSAS—		
Ritz-Decker	22,310	23,735
Voshell	6,950	7,350
Nikkel-Hollow	23,080	20,380
Others	77,720	75,880
Total Kansas	130,060	127,345
LOUISIANA—		
North Louisiana	26,500	26,000
Louisiana Gulf Coast	46,000	46,000
Total Louisiana	72,500	72,000
ARKANSAS	31,250	31,500
CALIFORNIA—		
Long Beach	75,100	73,600
Santa Fe Springs	54,500	54,500
Huntington Beach	49,000	42,300
Dominguez	20,500	20,200
Inglewood	11,900	11,700
Ventura Avenue	35,500	32,700
Seal Beach	9,100	11,200
Midway Sunset	47,000	45,600
Elwood	14,000	13,600
Kettleman Hills	62,500	63,500
Playa del Rey	11,000	11,200
Others	117,900	112,900
Total California	507,500	493,000
MOUNTAIN STATES—		
Wyoming	29,900	29,700
Montana	6,500	7,250
Colorado	2,350	2,400
New Mexico	37,700	37,600
Total Rocky Mountain States	76,450	76,950
EASTERN STATES	95,000	93,100
MICHIGAN	21,900	19,950
Total United States	2,785,440	2,673,210
Unreported East Texas output estimated	35,000	40,000
Total United States actual production, including East Texas excess	2,820,440	2,713,210

Wirt Franklin, independent leader, in a statement given to the press, evidenced a strong belief that the administration would agree to a price control scheme within the next few days. Undoubtedly jobbers have been running on greatly reduced stocks and buying which has been delayed during the present controversy will show an appreciable increase as soon as something definite is announced from Washington.

A second factor which weighed heavily on the market was the return of several major and a large number of independent purchasers to the crude oil posting of Carter Oil Company and Stanolind Crude Oil Purchasing Company, whose top price in Oklahoma and Kansas is 62 cents. It seemed to be generally believed, however, in Mid-Continent circles that the top price would be raised as soon as a code is perfected for the industry.

Crude oil movement to storage showed only a slight change during the week ending August 1 when estimates placed the net amount to storage as 42,000 barrels as compared to 46,000 barrels daily to storage during the preceding week. The fact that oil continues to move to storage is taken by some to indicate that purchasers feel crude oil prices will advance at an early date and are making an effort to replenish stocks at the lower prices. Several integrated companies have stated in recent hearings before the Oklahoma Corporation Commission that their stocks have been depleted considerably below a safe working margin.

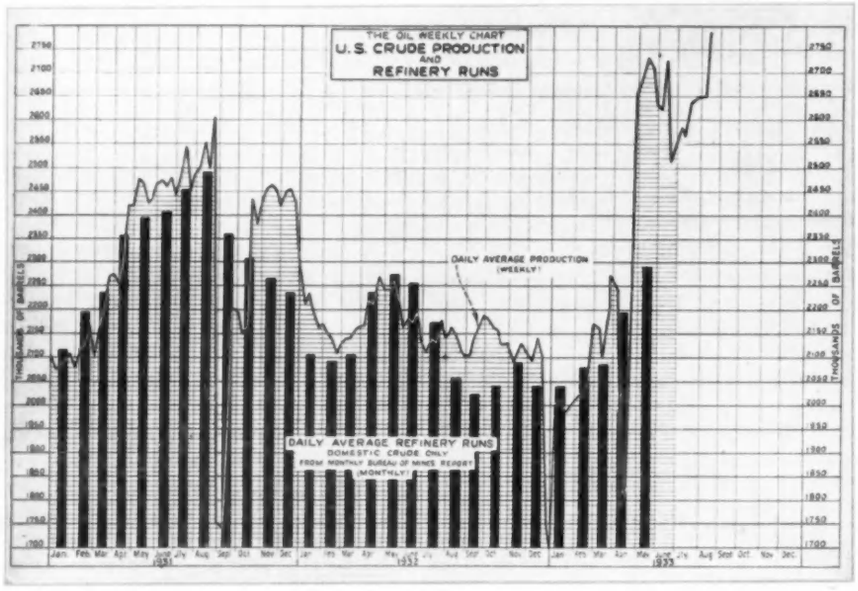
Mid-Continent prices, based on Group 3, Oklahoma, and exclusive of Federal tax, appeared to be as follows as the week neared a close with upward revisions expected momentarily:

Refinery Gasolines

Low octane U. S. Motor fuel, 2⅞ to 3⅛ cents; middle octane, 3½ to 3¾ cents; high octane, 4 to 4¼ cents; 60-62, 400 e.p., 3¼ to 3½ cents; 64-66, 390 e.p., 3½ to 3⅝ cents; 64-66, 375 e.p., 3⅝ to 3¾ cents; 68-70, 350 e.p., 3¾ to 4 cents.

Natural Gasolines

The 11 to 12 pound vapor pressure grades, stabilized, 3¾ to 4 cents; 13 to 15 pound vapor, 3⅝ to 3¾ cents; 16 to



18 pound vapor, 3⅜ to 3½ cents; 18 to 22 pound vapor, 3¼ to 3⅜ cents; 24 to 26 pound, 2⅞ to 3 cents.

Kerosenes

The 41 to 43 gravity, water white, 2¼ to 2⅜ cents; 42 to 44 gravity, 2⅛ to 2½ cents; and 44 to 46 gravity, 3¾ to 4 cents.

California Steady Despite Overproduction

IN spite of an overproduction of around 35,000 barrels daily early in August in California, the markets are holding steady. Huntington Beach, Long Beach and Santa Fe Springs are responsible for the overproduction, and it is a question of how and when this overage will be wiped out. The new code may do it, and maybe it will not. California has no law fixing allowables, and the only figure is one reached by agreement of a majority of the producers. But the few who refuse to abide by the mutually agreed production limit upset the total state figure.

Total storage of all petroleum products in California declined 3,237,171 barrels comparing January 31 figures with total for June 30, this year. During same period, gasoline storage declined 935,562 barrels to 14,790,506 barrels. This includes gasoline, natural gasoline and naphthas.

There has been no report in 60 days of a spot sale of any kind of petroleum products, and for that reason it is hard to say what the actual market is. New York buyers are willing to pay 4½ cents a gallon for California gasoline loaded on tankers at San Pedro. California companies are asking six cents, but it is thought that offers of 5 to 5¼ cents would complete a purchase.

The retail gasoline market is holding fairly firm with very little price cutting. Gasoline can be purchased at independent stations at 14 to 14½ cents a gallon, against a price of 14.9 cents for third grade gasoline at major company stations.

The overproduction at Long Beach and Huntington Beach furnishes practically all of the free crude available in the state, with a small amount at Santa Fe Springs.

East Texas Fuel Oil Sold To East Coast Refineries

Tyler, Texas.—Approximately 2000 cars of low gravity fuel oil accumulated in earthen pits by East Texas independent refiners since last spring has been purchased by Brokers at prices ranging from 10 to 20 cents per barrel for delivery to refineries on the Atlantic Coast for use in cracking. This residue material varies from 16 to 18 gravity and will be transported to tanker loading terminals at Houston and Galveston in coil equipped cars. One of the largest single sales involved 500 cars by Beacon Oil & Refining Company, owner of one of the oldest plants near the field.

East Texas plants have been forced to resort to earthen storage in disposing of their large volume of fuel oil due to inability to market same even with prices at less than five cents per barrel. A few plants are equipped to crack this material and had counted on the accumulated stocks as a potential reserve supply, but the invasion of the market by outsiders has altered the situation.

Texas Sues for 100% Return on Royalties

Austin, August 11.—Litigation by which the State of Texas will seek to collect deductions made at the customary two per cent for b.s. and water was begun by Attorney General James V. Allred today. His first action was against The Texas Company for $8,772 as unpaid royalty, unpaid gross production tax, regulating tax and interest.

The suit is based on royalty payments of the Landreth strip of 182 acres in Crane and Upton Counties. The petition sets forth that The Texas Company made deductions of two per cent before making payment on the royalty interest. This is the customary procedure.

Indications are that similar suits will be filed against other concerns which produce oil from lands owned by the State.

Recently a ruling of the Department of the Interior was to the effect that oil companies would in the future pay on the full 100 per cent production on oil produced from public domain or on lands supervised by the department for Indian tribes.

Week's Imports Average 103,000 Barrels Daily

IMPORTS of crude and refined oils at principal United States ports during the week ended August 5 totaled 721,000 barrels, a daily average of 103,000 barrels, compared with 128,000 barrels daily the previous week and 141,036 barrels daily the four weeks ending August 5.

The total of 721,000 barrels included 69,000 barrels received at Baltimore, 492,000 barrels at New York, and 160,000 barrels at Philadelphia; and consisted of 418,000 barrels of crude and 303,000 barrels of fuel oil.

Receipts of California oil at Atlantic ports for the week ending August totaled 74,000 barrels, or 10,571 barrels daily, compared with 89,429 barrels daily the previous week and 40,143 barrels daily for the four weeks ending August 5.

Corning Crude Price Again Adjusted

After having been increased five cents a barrel to 95 cents about a week earlier, Corning grade crude oil was cut back 10 cents to a new posting of 85 cents effective August 4, in a new listing of The Joseph Seep Purchasing Agency of the South Penn Oil Company.

Crude Runs to Stills, Motor Fuel Stocks, Gas and Fuel Oil Stocks and Cracked Gasoline Production, Week Ended August 5, 1933

(Figures in barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		MOTOR FUEL STOCKS				Gas and Fuel Oil Stocks	Daily Charging Capacity of Cracking Units			Cracked Production Daily Average
	Potential Rate	Reporting Total	Reporting %	Daily Average	% Operated	At Refineries	Bulk Term., in Transit & Pipe Lines	(a) Other M. F. Stocks	Total Motor Fuel		Potential Rate	Reporting Total	Reporting %	
East Coast	582,000	582,000	100.0	488,000	83.8	5,289,000	9,447,000	45,000	14,781,000	8,340,000	496,500	471,500	95.0	76,000
Appalachian	150,800	139,700	92.6	96,000	68.7	1,215,000	651,000	176,000	2,042,000	835,000	68,600	68,600	100.0	24,000
Ind., Ill., Ky	436,600	425,000	97.3	346,000	81.4	4,446,000	2,909,000	67,000	7,422,000	4,763,000	325,300	308,000	94.7	95,000
Okla., Kans., Mo	462,100	379,500	82.1	265,000	69.8	2,936,000	1,473,000	383,000	4,792,000	3,870,000	255,800	234,000	91.5	56,000
Inland Texas	274,400	161,100	58.7	82,000	50.9	1,066,000	163,000	218,000	1,447,000	1,809,000	77,400	61,200	79.1	19,000
Texas Gulf	507,500	497,500	98.0	428,000	86.0	5,058,000	259,000	244,000	5,561,000	7,481,000	358,400	348,900	97.3	95,000
Louisiana Gulf	162,000	162,000	100.0	116,000	71.6	1,113,000	185,000	.....	1,298,000	1,888,000	70,600	70,600	100.0	19,000
North La.,—Ark	82,600	76,500	92.6	50,000	65.4	174,000	51,000	34,000	259,000	559,000	41,500	38,500	92.8	10,000
Rocky Mountain	80,700	63,600	78.8	32,000	50.3	959,000	.....	26,000	985,000	771,000	45,800	42,500	92.8	13,000
California	848,200	821,800	96.9	479,000	58.3	6,320,000	5,003,000	2,557,000	13,880,000	99,731,000	208,600	208,600	100.0	58,000
TOTALS WEEK: August 5, 1933	3,586,900	3,308,700	92.2	2,382,000	72.0	28,576,000	20,141,000	3,750,000	52,467,000	130,047,000	1,948,500	1,852,400	95.1	465,000
July 29, 1933	3,586,900	3,308,700	92.2	2,424,000	73.3	28,851,000	20,186,000	3,685,000	52,722,000	129,461,000	1,948,500	1,852,400	95.1	484,000

Below are set out estimates of Crude Runs and Motor Fuel Stocks on B. of M. basis for Week August 5, 1933, compared with certain August, 1932 Bureau figures.

Estimate B. of M. Basis Week August 5, 1933	2,530,000	(b)	29,580,000	21,140,000	3,750,000	54,470,000		525,000
U. S. B. of M., August, 1932 Figures—:		8/1	34,349,000	23,937,000	3,895,000	62,181,000		
August 1932 Daily Average Crude Runs	2,170,000	8/31	32,098,000	20,612,000	4,882,000	57,592,000	August 1932 Daily Average Cracked Prod.	464,000

(a) Estimated. Includes unblended natural gasoline at refineries and plants, also blended motor fuel at plants.
(b) Estimated to permit comparison with A. P. I. Economics Report which is on Bureau of Mines basis.

Commission Can Not Force Reports from Refiners

Austin, Texas.—The Texas Railroad Commission has no power to force refineries to install meters, make reports, permit the inspection of the plant, books and records, or allow the gauging of their tanks by commission agents under an opinion handed down by a three-judge federal court.

Judges Hutcheson, Wilson and Grubb held that the statute under which commission orders were issued was not sufficiently broad to include refineries. The case was Overton Refining Company et al vs. C. V. Terrell.

Said the court: "We think that the plaintiff is right. It is one thing to subject persons to the pains and penalties of the law for violation of the penal statutes; it is another thing to subject them to sweeping inquisitions, visitations and interrogations by extra-judicial bodies, for the purpose of obtaining information against them or other persons as a basis for prosecutions. When such authority is claimed, a statute purporting plainly and definitely to confer it must be shown. Authority in the commission to impose these burdens on them (the refineries) seems to us to be lacking."

The court granted an interlocutory injunction restraining the commission from enforcing these orders agains refineries.

Summary of Field Results During Past Week

State	Completions	Oil wells	Gas wells	Failures	Initial Prod.
Arkansas	1	.	.	1	.
California	.	.	.	.	.
Colorado	1	.	.	1	.
Illinois	1	1	.	.	7
Indiana	4	.	3	1	.
Kansas	7	6	.	1	2,999
Kentucky	1	1	.	.	5
Louisiana	11	3	.	8	2,625
Michigan	3	2	.	1	18,100
Mississippi	1	.	1	.	.
Montana	2	2	.	.	55
New Mexico	2	2	.	.	170
New York	.	.	.	.	.
Ohio	17	4	8	5	51
Oklahoma	32	18	2	12	8,871
Texas	98	67	5	26	316,640
West Virginia	7	3	4	.	536
Wyoming	1	.	1	.	.
Total	189	109	24	56	350,059

D. H. STARLING, superintendent for Atlantic Pipe Line Company, is recovering in a Hobbs, New Mexico, hospital, from a back injury sustained when a chain hoist broke letting the car upon which he was working fall upon him.

Texas Petroleum Council Starts Membership Drive

Austin, Texas.—The Texas Petroleum Council has begun a drive for membership, according to president A. W. Walker Jr., and invitations are being sent out to oil operators throughout the state.

During the past week the council has laid ground-work for organization of regional committees in Southwest Texas and the Gulf Coast. These will be arranged on the same plan as the East Texas regional committee.

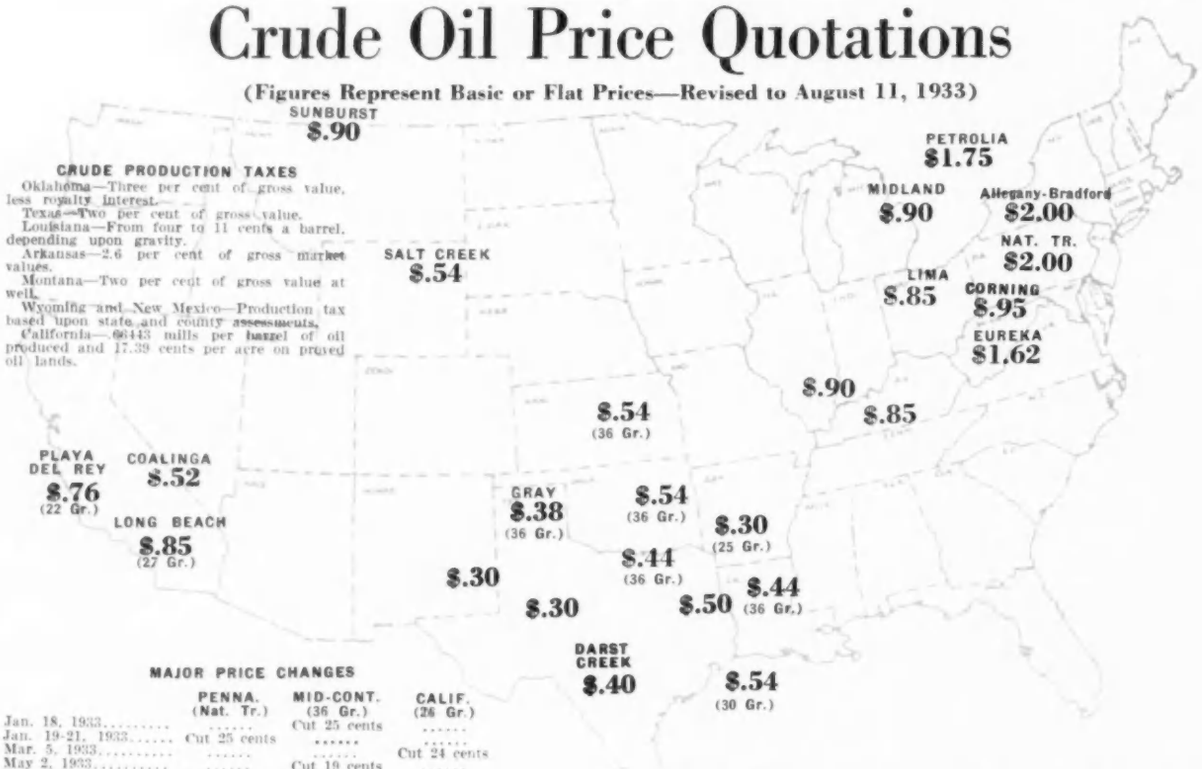
A meeting of the executive committee has been scheduled for Austin on August 20, the day before the statewide proration hearing. The finance committee will meet the same day.

Comparison of Permits Granted For New Wells

State	For week ending Aug. 5	Total this month	Total this year	Total this date last year	1932 year total
Arkansas	.	.	32	13	33
California	84	84	582	185	354
Louisiana	40	40	483	295	451
Kansas	25	25	389	391	463
Michigan	23	23	207	101	183
Oklahoma	32	32	641	677	1054
Texas	285	285	4147	5540	7099
Total	489	489	6481	7202	9637

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to August 11, 1933)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market values.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.06443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
Jan. 18, 1933	.....	Cut 25 cents	.....
Jan. 19-21, 1933	Cut 25 cents	.....	.....
Mar. 3, 1933	.....	.....	Cut 24 cents
May 2, 1933	.....	Cut 19 cents	.....
May 9, 1933	Cut 20 cents	.....	.....
May 22, 1933	Up 10 cents	.....	.....
June 19, 1933	Up 10 cents	Up 19 cents	.....
June 26, 1933	Up 10 cents	.....	Up 9-12 cents
July 6, 1933	Up 13 cents	Up 10 cents	.....
July 17, 1933	Up 15 cents	.....	.....
July 28, 1933	Up 15 cents	.....	.....

Oklahoma and Kansas: Effective July 6-8, 1933, below 25 gravity 30 cents, 25-25.9 gravity 32 cents, 2-cent spread to 62 cents for 40 and above.

North and North Central Texas: Effective June 17-19, 1933: below 29 gravity 28 cents, 29-29.9 gravity 30 cents, 2-cent spread to 52 cents for 40 gravity and above.

East Texas Field: Effective June 17-19, 1933: 50 cents.

Corsicana, Texas, Heavy: Magnolia, effective June 17, 1933: 30 cents.

Texas Panhandle, Gray County: Humble and others, June 19-22, 1933, below 35 gravity 34 cents, 35-35.9 gravity 36 cents and 2-cent differential to 46 cents for 40 gravity and above. Philtex Oil Co., Aug. 2, 1933, below 31 gravity 30 cents, 31-31.9 gravity 32 cents, 2-cent spread to 50 cents for 40 and above.

Carson and Hutchinson Counties: Humble and others, June 19-22, 1933, below 35 gravity 29 cents, 35-35.9 gravity 31 cents, and 2-cent differential to 41 cents for 40 gravity and above. Philtex Oil Co., Aug. 2, 1933, below 31 gravity 20 cents, 31-31.9 gravity 22 cents, 2-cent spread to 40 cents for 40 gravity and above.

West Texas and New Mexico: Includes crude from Crane-Upton, Crockett, Ector, Howard-Glasscock, Mitchell, Pecos, Jones, Fisher and Winkler Counties, Texas, and Lea County, New Mexico. Effective June 19, 1933, 30 cents.

Yates Shallow: Shell, June 20, 1933, 25 cents.

Texas-Louisiana Gulf Coast fields: Effective June 17-19, 1933: below 20 gravity 32 cents, 20-20.9 gravity 34 cents, and 2-cent differential to 62 cents for 34 gravity and above. Exception listed below.

Conroe, Texas: Humble, effective June 19, 1933, and Texas and Tide Water June 22, 1933: 35-35.9 gravity 59 cents and 2-cent differential to 69 cents for 40 gravity and above.

Tomball, Texas: Effective June 19, 1933: 65 cents flat.

Livingston, Texas: Shell, effective June 20, 1933, 50 cents flat.

Iowa and Cameron Meadows, Louisiana: Magnolia, effective June 20, 1933: below 20 gravity 22 cents, 20-20.9 gravity 24 cents and 2-cent differential to 52 cents for 34 gravity and above.

Darst Creek: Effective June 9, 1933, 40 cents. **Luling:** Magnolia, effective Aug. 2, 1933, 35 cents. **Salt Flat:** effective June 19, 1933, 40 cents. **Lytton Springs:** Magnolia, effective Aug. 2, 1933, 45 cents. **Mirando:** effective June 19, 1933, 40 cents. **Pettus:** effective June 19, 1933, 55 cents. **Refugio Heavy:** effective June 19, 1933, 45 cents. **Refugio Light:** same as Gulf Coast. **Saxet:** effective June 19, 1933, 45 cents.

North Louisiana and Arkansas:

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Crichton, DeSoto-Red River, Cotton Valley, Sarepta, Cartersville, Pine Island, El Dorado, Rainbow Light: effective May 3, 1933, 25 cents.

Effective June 19-20, 1933, Texas Co., Gulf, Magnolia: schedule Oklahoma, Standard of La., effective June 19, 1933; Caddo below 29 gravity 26 cents, 29-29.9 gravity 28 cents, and 2-cent differential to 50 cents for 40 gravity and above; Homer, below 29 gravity 32 cents, 29-29.9 gravity 34 cents, and 2-cent differential to 56 cents for 40 gravity and above; Haynesville, below 29 gravity 29 cents, 29-29.9 gravity 31 cents, and 2-cent differential to 53 cents for 40 gravity and above; Sabine and DeSoto, including Zwolle, Sarepta and Cartersville, below 29 gravity 35 cents, 29-29.9 gravity 37 cents and 2-cent differential to 59 cents for 40 gravity and above; El Dorado, Arkansas, below 29 gravity 37 cents, 29-29.9 gravity 39 cents and 2-cent differential to 61 cents for 40 gravity and above.

Smackover, Arkansas: Effective June 9-20, 1933, 30 cents flat.

Rocky Mountain States:

Salt Creek: July 6-8, 1933, same as Oklahoma. **Elk Basin and Grass Creek:** July 8, 1933, 72 cents. **Big Muddy:** July 8, 1933, 55 cents. **Lance Creek:** Dec. 16, 1932, 92 cents. **Rock Creek:** July 8, 1933, 54 cents. **Sunburst:** July 8, 1933, 90 cents. **Osage:** Jan. 18, 1933, 52 cents. **Cat Creek:** May 6, 1933, 35 cents. **Pondera:** May 9, 1933, 55 cents. **Hogback, N. M.:** May 8, 1933, 50 cents.

Mid-Western States: (Effective August 2, 1933).

Lima: 85 cents; **Illinois:** 77 cents **Princeton:** 77 cents; **Western Kentucky:** 72 cents.

PENNSYLVANIA: (Effective July 28, 1933).

Bradford District: $2.00; **National Transit Oil:** $2.00; **Southwest Pennsylvania Pipe Line Oil:** $1.67; **Eureka Pipe Line Oil:** $1.62; **Buckeye Pipe Line Oil:** $1.47; **Corning Crude:** effective August 4, 1933, 85 cents.

MICHIGAN: Central Michigan, Aug. 7, 1933, 80 cents. **Muskegon,** Dec. 31, 1932, 76 cents to $1.00.

Canada: (Effective Jan. 18, 1933). **Petrolia:** $1.75; **Oil Springs:** $1.82.

California—Posted by Standard Oil Company. Effective June 26, 1933

Gravity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
14-14.9	$.55	$.55	$.55	$.55	$.55	$.55	..	..	$.55	$.55	$.55	$.55	$.55	..	$.52	$.52	$.52	$.52	$.52	..
15-15.9	.55	.55	.58	.58	.55	.58	..	..	.85	.55	.55	.55	.55	..	.52	.52	.52	.52	.52	...
16-16.9	.55	.55	.61	.61	.58	.61	..	..	.57	.55	.57	.55	.55	..	.52	.52	.52	.52	.52	..
17-17.9	.57	.55	.63	.64	.61	.64	..	..	.60	.59	.60	.55	.57	..	.52	.52	.53	.52	.52	..
18-18.9	.60	.56	.65	.67	.64	.67	..	..	.63	.62	.62	.55	.60	..	.52	.52	.56	.52	.52	..
19-19.9	.63	.60	.68	.70	.67	.69	..	..	.65	.66	.65	.55	.63	..	.52	.54	.59	.52	.53	..
20-20.9	.66	.63	.71	.73	.70	.73	..	..	.68	.69	.68	.55	.65	..	..	.57	.62	.53	.52	..
21-21.9	.69	.67	.73	.77	.73	.75	..	..	.70	.72	.71	.58	.68	$.60	..	.61	.65	.56	.55	..
22-22.9	.71	.70	.76	.80	.76	.77	..	..	.73	.75	.74	.60	.71	.64	..	.65	.68	.59	.57	..
23-23.9	.74	.73	.78	.83	.79	.80	$.68	..	.75	.78	.76	.64	.73	.67	..	.69	.70	.61	.60	..
24-24.9	.77	.77	.81	.86	.82	.83	.71	..	.78	.82	.79	.67	.76	.70	..	.72	.73	.64	.63	..
25-25.9	.80	.80	.83	..	.85	.85	.75	..	.80	.85	..	.71	.79	.73	..	.76	.76	.67	.66	..
26-26.9	.82	.83	.86	..	.88	.88	.79	..	.83	.88	..	.75	.82	.76	..	.80	.79	..	..	..
27-27.9	.85	.87	.88	..	.91	.91	.82	..	..	.92	..	..	.84	.80	..	.83	.81	..	..	..
28-28.9	.88	.90	.91	..	.94	.94	.86	..	..	.95	..	..	.87	.83	..	.87	.84	..	..	..
29-29.9	.90	.93	.93	..	..	..	.89	..	..	.98	..	..	.90	.86	..	.91	.87	..	..	..
30-30.9	.93	.97	.96	..	..	..	.93	..	..	..	..	..	.93	.89	..	.95	.89	..	..	..
31-31.9	..	..	..	..	..	..	.97	..	..	..	..	..	.95	.92	..	.98	..	..	..	..
32-32.9	..	..	..	..	..	..	1.00	..	..	..	..	..	.98	.96	..	1.02	..	..	..	..
33-33.9	..	..	..	..	..	..	..	$.91	..	..	..	..	1.01	.99	..	1.06	..	..	..	.76
34-34.9	..	..	..	..	..	..	..	.94	..	..	..	..	1.03	1.02	..	..	..	..	..	.78
35-35.9	..	..	..	..	..	..	..	.97	..	..	..	..	..	1.05	..	..	..	..	..	.80
36-36.9	..	..	..	..	..	..	..	1.00	..	..	..	..	..	1.08	..	..	..	..	..	.82
37-37.9	..	..	..	..	..	..	..	1.03	..	..	..	..	..	1.11	..	..	..	..	..	.84
38-38.9	..	..	..	..	..	..	..	..	..	..	..	..	..	1.14	..	..	..	..	..	.86
39-39.9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Subject to field-gathering charge of 5c per barrel.

1. Signal Hill. 2. Seal Beach, Alamitos Heights. 3. Huntington Beach. 4. Inglewood. 5. Playa Del Rey. 6. Olinda-Brea Canyon. 7. Athens-Rosecrans-Domingues. 8. Elwood Terrace. 9. Torrance. 10. Richfield. 11. Whittier, La Habra. 12. Montebello. 13. Coyote Hills. 14. Santa Fe Springs. 15. Newhall, McKittrick, Kern River. 16. Midway-Sunset, Elk Hills, Buena Vista Hills. 17. Lost Hills. 18. Coalinga. 19. Wheeler Ridge. 20. Kettleman Hills.

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The Westcott Pipe Line Swing Check Valve is a favorite that comes in a sure winner everywhere it performs.

It is of the sturdiest construction, tested to double working pressure. A large opening into the top by means of a blind flange, permits easy access for the removal of any obstruction. Openings are designed to permit free passage of pipe line scrapers. Westcott check valves are furnished in all standard sizes for pressures of 125 lbs., 500 lbs. and 800 lbs., tested to pressures of 250 lbs., 1000 lbs. and 1600 lbs.

When you put your money on Westcott you have picked a sure winner, every time.

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Bonds Must Be Filed With Drilling Notices

Los Angeles.—After September 1 the petroleum industry in California will learn what amount of drilling is to follow the wave of intentions to drill that came into the office of the oil and gas supervisor prior to July 29. During the five weeks ending then, drilling notices reached 349. In the corresponding period of 1932 only 22 notices were filed and in 1931 the total was 13. The total for the year, through July 29, is 498 against 178 for the corresponding period of 1932.

But a law requiring a bond of $5000 with each intention to drill, takes effect August 22 in California. R. D. Bush, oil and gas supervisor, has announced that he will allow 10 days for these bonds to be filed for the drilling intentions taken out in the rush of July. Unless a bond is filed within that time the intention to drill will be cancelled.

The opinion is held in official circles as well as within the petroleum industry that actual drilling will lag far behind the intentions of drilling. Many notices were filed under the opinion that federal regulation of field work would be included in a petroleum code. Unless there is a change in the attitude at Washington this will not be attempted.

Mountain View Definitely Out of Wildcat Class

Bakersfield.—Seven strings of tools are going at Mountain View in Kern County, only a few miles out of Bakersfield. This is the area where several wildcats have been drilled in years past, and where showings were reported but no well was completed for commercial production until Dana Hogan completed Wharton 1 at 5862 feet, taking in 62 feet of pay formation. This well is now producing 510 barrels a day of 35 gravity oil, pinched in. The oil is being hauled to a nearby refinery.

Fullerton Oil Company has secured a lease in the field, the newest entrant, but the lease has a three-year drilling clause.

Four New Wells in Lot Area at Huntington Beach

Los Angeles.—During the past week, four new wells were completed in the town lot area of the Huntington Beach field for about 8000 barrels initial production, gravity ranging from 23 to 25.5, and depths of about 4500 feet. Blocks 118 and 122 seem to be favorites, located near the ocean.

Twenty-seven projects are active, drilling, redrilling or working over, making this the livest field in the state at the time. The old Richfield field is a close second with 12 strings of tools going.

Some two weeks ago, Wilshire Oil Company's No. 15 near the highway in the townlot area at Huntington Beach came in for better than 5000 barrels of 25 gravity oil, and is still flowing at a 4500-barrel rate. This well followed several making 1000 barrels each or better, and since completion of the 5000 barrel well, four others have been completed.

Petrol Corporation's Lambert 1 was completed at 4550 feet, with 725 feet of perforated pipe, and is making 2000 barrels on compressor. It is making 23 gravity oil with a very small cut. O. R. Howard's Travis 1 is good for 1000 barrels on the compression with bottom of hole at 4516 feet. Eight hundred feet of perforated was landed. Speik Oil Company's No. 3 was good for 2400 barrels of 25 gravity oil at 4530 feet, with 600 feet of perforated pipe at bottom. Simaroo Oil Company's Morris 1 was also completed for 2500 barrels of 23 gravity oil with bottom of hole at 4550 feet, flowing through 765 feet of perforated.

Standard Oil Company is drilling three holes at Huntington Beach and last week announced two new locations. Thermo Corporation is drilling three projects, and Wilshire Oil Company is drilling six holes, one of them being a redrill job.

Richfield to Have 25 Strings Busy in 60 Days

Los Angeles.—Twelve wells are drilling in the old Richfield field in Orange County, and new locations are being made each week. It is reported and predicted that around 25 strings of tools will be busy in this field in the next 30 to 60 days. Some of the old holes, where derricks had been removed, are to be drilled deeper. This old field was first placed in the production column in 1919 and for several years activity has been at a very low ebb. Recent completions in the lower zone brought about renewed interest.

Montebello Field Has Revival of Interest

Los Angeles.—The old Montebello field, 10 miles from Los Angeles, is trying to stage a comeback from an oil sand close to 7000 feet. This field came into being in 1917, and had an active life for some years, but during the past five years has been quiet. Universal Consolidated Oil Company's No. C-1, landed a string of 8⅝-inch at 6940 feet with bottom at 7010 feet. Top of oil sand was found at 6945 feet and from that point to bottom it is stated that the formation is 70 per cent oil sand. It is possible that a test will be made by end of the week.

California Permits Still Far Above Normal Figure

Los Angeles.—The spurt to make new locations in proven fields turned the weekly total of new wells sharply upward during the week, 84 notices of intention to drill having been filed with the state oil and gas supervisor. Los Angeles basin fields led the increase, but miscellaneous northern districts also came in for a good number. New wells reported this week included:

Superior Oil Company's Berry 2, Chudnow 2, Gilmore 2, Groves 2, Huntington Beach Fee 14, Huntington Beach Fee 16, Huntington Beach Fee 18-1, Huntington Beach Fee 18-2, all on Section 10-6-11; Byrens Oil Company's No. 2, Section 10-6-11; A. M. Kupfer's Atlas 6, Atlas 7, and Atlas 8, all on Section 10-6-11; Paul Edward Patten's No. 1, and No. 2, Section 34-5-11, and No. 1, No. 2, No. 3 and No. 4, Section 35-5-11; Raldo Exploration Company's Raldo 1, Section 10-6-11; The Termo Company's Fee 5, Section 10-6-11; Woodward Oil Company's Ames 2, Section 10-6-11; Standard Oil Company's P. E. 17, P. E. 18, and Huntington Beach 64, Section 10-6-11; at Huntington Beach.

Union Oil Company's Callender 32, Callender 33, Callender 34, Callender 35, Callender 36, Callender 37, Callender 38, Callender 39, Callender 40, Callender 41, Carson 6, Hellman 23, Hellman 24, Hellman 25, Hellman 26, Hellman 27, Hellman 28, Hellman 29, Hellman 30, Hellman 31, Hellman 32, Hellman 33, Hellman 34, Hellman 35, Hellman 36, Hellman 37, Hellman 38, Section 33-3-13, and Hellman 28, Section 34-3-13, and Callender 42, Section 32-3-13, at Dominguez.

Ethyl Oil Company's No. 1, Section 19-2-11, and No. 2, Section 18-2-11, in Los Angeles County.

Palm Springs Oil and Gas Company's Desert Estates 1, Section 31-4-6, and Gary Cooper 1, Section 23-4-5, in Riverside County.

George L. Clayton's No. 1, Section 31-3-12, at Long Beach.

Delaney Petroleum Corporation's Olsen 1, Section 28-3-9, at Richfield.

Delaney Petroleum Corporation's Daley 2, Section 3-5-12, at Seal Beach.

Standard Oil Company's Murphy-Coyote 114, Section 18-3-10, at Coyote Hills.

O. K. Clarke's Clarke 1, Section 12-3-14, at Rosecrans.

Henry Renshaw Dabney's No. G-1, Section 20-2-18, at Simi.

Caroline C. Spalding's Blue Goose 93-8, Section 16-4-29; Pacific Western Oil Company's No. 92-11, Section 16-4-29, at Elwood.

The Kern River Oilfields of California's Kernco 4, Section 13-28-28; Golden Bear

Oil Company's K-1, Section 6-28-29; and J. Burris Mitchel's No. 3, No. 4, Section 6-28-29, at Round Mountain.

P. N. Snyder's Mountain View 1 and Mountain View 2, Section 24-30-28; Little and Bell's Lakern Farms 1, Section 5-31-29, at Mountain View.

Dil-Harp Oil Company's Dil-Harp 1A, Section 25-24-26, in Tulare County.

L. A. Bergere's No. 1, No. 2, No. 3, and No. 4, Section 11-27-28, and No. 5, Section 15-27-27, at Mt. Poso.

Superior Oil Company's Mantes 1, Section 6-22-16, in Fresno County.

Standard Oil Company's No. 38, Section 19-21-21, No. 8, and No. 58, Section 27-21-17, and No. 45, Section 1-22-17, at Kettleman Hills.

California Wildcat Work Shifts to Northern Area

Los Angeles.—Shifting of interest in wildcatting from the Los Angeles basin to more northerly fields has reduced the number of operations in the southern area to a very small total. Leasing and new locations in Kern, Fresno and Santa Barbara Counties should check any decrease in the state total, and considerable drilling will take place in the San Joaquin Valley. The Los Angeles basin, being a comparatively small area, has been much more widely drilled than the larger districts toward the north.

At Belridge, in Kern County, Casa Mira Oil Company's Theta 1-A, Section 29-20-29, is drilling in hard shale at 3916 feet.

At Comanche Point, Comanche Oil Company's Comanche 1, Section 15-32-29, is awaiting completion of water lines and arrival of heavy equipment.

In the Devil's Den district, Lincoln Petroleum Corporation's Core Hole 1, Section 10-25-18, is coring shale at 2150 feet.

Near Lost Hills, Associated Oil Company's Williamson 1, Section 2-26-20, is drilling in hard shale and streaks of oil sand at 5115 feet.

Near McKittrick, General Petroleum Corporation's Lovitt 1, Section 10-30-21, is drilling in slanting formation at 2480 feet and may not drill much deeper.

All Mountain View extension tests have been placed in the proven column, although the field limits have not been defined.

At Wheeler Ridge, Badger Oil Company's El Tejon 1, Section 31-11-19, is drilling in hard sand at 4050 feet.

Santa Barbara County

In the Cuyama Valley, Cuyama Valley Oil & Gas Company's No. 1, Section 12-10-27, is changing boilers at 3040 feet.

Near Goleta, Standard Oil Company's Chase-Bryce 1, Section 20-4-28, is drilling in hard shale at 3375 feet; heavy gas pressure was encountered at 3350 feet.

At Lompoc, Meganos Oil Company's No. 2, Section 28-8-34, is rigging rotary.

At Point Concepcion, Monterey Exploration Company's Hollister 1, Section (-)-5-31, is standing cemented at 502 feet.

Near Santa Maria, J. D. Martin's Rice 1, Section 23-10-34, is a location.

Ventura County

At Conejo, American Oil Company's Powell 1, Section 33-2-20, is drilling in volcanics at 2656 feet.

In Hopper Canyon, Bardeen Petroleum Corporation's Lankershim 2, Section 13-4-19, is drilling in shale at 2933 feet. Commander Oil Company's Fennel 1, Section 13-4-19, is trying to place on pump at 2454 feet. Hancock Oil Company's Hadley 1, Section 13-4-19, is drilling in shale at 1678 feet. Oil Ridge Oil Company's No. 1, Section 1-4-19, is grading roads to location.

At Las Posas, Las Posas Petroleum Corporation's Mahan 1, Section 22-3-20, is drilling in shale at 4415 feet.

At Ojai, Midlands Oil Company's Canet 1, is redrilling at 4138 feet.

At San Miguelito, Continental Oil Company's Grubb 2, Section 23-3-24, is drilling in sand and shale at 7850 feet. Honolulu Consolidated Oil Company's Valenzuela 1, Section 23-3-24, is drilling in shale at 7880 feet.

At Santa Paula, J. W. Mosher's No. 1, Section 22-4-21, is drilling in shale at 1400 feet. International Oil Company's Anlauf 1, Section 21-4-21, is cleaning out at 1320 feet, after drilling to 1371 feet.

In the Sespe district, Bowles Oil Company's No. 3 is drilling in hard shale at 3200 feet. Imperial Gypsum & Oil Company's Burge 1, Section 32-5-19, is drilling in shale at 800 feet. H. A. Ivars' Star 7, Section 1-4-20, is drilling in hard shale at 2425 feet. Merchants Petroleum Company's Cochran 1, Section 1-4-20, is pumping 250 barrels of oil from 950 feet. Metro Grande Oil Company's No. 1, Section 6-4-19, is drilling in red shale at 2215 feet.

At Simi, Henry R. Dabney's No. 1, Section 20-2-18, is drilling in shale at 565 feet. Williamson and Donaker's No. 1, Section 36-3-18, is drilling in shale and streaks of sand at 508 feet.

On South Mountain, Los Cerritos Oil Company's No. 1, Section 17-3-20, is a location.

On Sulphur Mountain, William A. Kirk's No. 5, Section 21-4-22, was spudded in around August 1, and is drilling in surface sand and shale at 200 feet. Wilshire Oil Company's No. 1, Section 20-4-21, is drilling in shale at 2175 feet.

In Timber Canyon, Petro Well Producing Company's No. 4, Section 18-4-20, is pumping 20 barrels of heavy oil and the same amount of water from 4747 feet.

Miscellaneous

In Fresno County, Western Gulf Oil Company's S. P. 1, Section 15-17-15, is drilling in shale at 2665 feet. Bergman Oil Company's Loma 1, Section 12-12-11, is awaiting 6¼-inch casing to run at 4148 feet. Russ Oil Company's No. 1, Section 28-12-11, is drilling in shale at 2010 feet. Hogan Petroleum Company's Ladd 1, Section 28-20-16, is coring hard brown shale at 6500 feet. Superior Oil Company's Mantez 1, Section 6-22-18, is building rig. Graham-Loftus Oil Corporation's No. 1, Section 20-15-18, has been shut down at 5782 feet.

In Kings County, Magee and Stone's No. 2, Section 33-24-22, is swabbing water from 3190 feet; may be deepened.

In San Luis Obispo County, J. D. Martin's Edna A-3, Section 5-32-13, is redrilling at 565 feet after plugging back from 1000 feet.

Southern California

At Chatsworth, Marble Investment Company's Deer Lake 1, Section 6-2-16, is drilling in hard sandstone at 2450 feet.

At Lynwood, William L. Jones' Graham 1, Section 31-2-12, is redrilling at 3350 feet after plugging back from 4890 feet.

Near Newhall, Edwards Oil Company's No. 1, Section 23-3-16, is building a road to location. Hudson Petroleum Company's Alexander 1, Section 1-3-16, is flowing a small amount of nine gravity oil. C. T. Lester's No. 1, Section 1-3-16, is a new location.

At Newport Beach, Nuoil Company's Gessell 2, is idle at 3850 feet.

North of Long Beach, Peoples Oil & Gas Company's No. 1, Section 31-3-12, had rig removed from location which was never drilled.

Near Palms, Palms Ridge Oil Company's No. 1, Section 2-2-15, is drilling in black shale at 6450 feet.

At Puente, Signal Petroleum Company's Rowland 1, Section 14-2-10, is bailing water and trace of oil from 4915 feet.

In the Wilmington district, Pacific Oil Investment Company's Lupie 1, Section 28-4-13, is pumping oil and sand from 3618 feet. Wilmington Terminal Oil Company's Banning 1, Section 28-4-13, is pumping oil and sand from 3640 feet.

In Riverside County, H. J. Keeley's Damron 1, Section 21-4-6, is plugging to abandon at 650 feet.

In San Bernardino County, C. F. McCarthy's No. 1, Section 14-3-6, is drilling in surface sand at 365 feet. Great American Oil Company's Gapco A-1, Section 18-2-8, is drilling in hard shale at 2636 feet; Gapco B-1, Section 18-2-8, is drilling in hard dark shale at 1200 feet.

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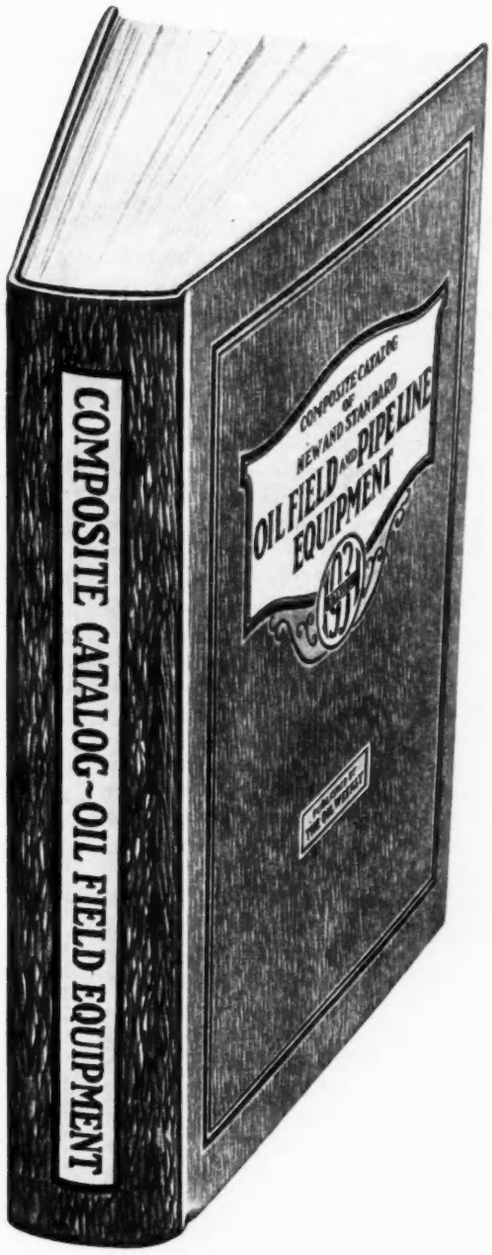

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Late Interest Centered On Oklahoma County

Tulsa, August 11.—Interest was again being focused on Oklahoma County, due to two wildcat tests having reached depths at which they are picking up markers and to a test on the east side of the fault line in the Oklahoma City pool. Frank Russell Incorporated's Highley 1, NW SW SW SE Section 23-12n-3w, in the northeast edge of Oklahoma City and approximately two miles east of the state capitol building was drilling below 4860 feet and has passed through Pawhuska limestone with no reports as to its depth.

Eighteen miles east of Oklahoma City, Mid-Continental Oil Company was drilling below 3300 feet in Edwards 1, C SE SE Section 19-11n-1e, on the Stella Newalla structure. Early in the week operators picked up a lime which was correlated as Pawhuska but were unable to determine whether it was the upper or lower. If upper Pawhuska the well is running normal and if lower Pawhuska it would be comparatively high.

In the Oklahoma City pool, Transit Oil Company completed Fowler 1, NE NE SE SW Section 22-11n-3w, flowing 557 barrels in two hours and making gas at the rate of 23 million cubic feet from Wilcox sand at 6505 to 6527 feet. It was cutting eight per cent water, indicating that the southwest limit of production at this point on the structure is probably less than another location to the southwest.

Gulf Production Company of Oklahoma completed Meaders 5, SW NW NW SE Section 22-11n-3w, for an initial flow of 1506 barrels in two hours and 45 minutes from Wilcox sand at 6515 to 6593 feet. Gas gauged 17¾ million cubic feet. Blackwell Oil & Gas Company went out of Pennsylvania at 6415 feet and was drilling below 6476 feet in School Land 1, SW SW SE Section 36-12n-3w, on the east side of the fault in the Oklahoma City pool. It was reported running so low that it probably would not make a well.

Things were picking up for Gypsy Oil Company in the new Crescent pool of Logan County when it had to spud on the Edwards lease, N½ NE Section 33-17n-4w, to prevent expiration of a lease. The test was spudded Thursday afternoon August 10, only a few hours before expiration time.

Oklahoma City.—Three of the five wells which had been closed in for over production in the Oklahoma City pool, were reopened during the past week under supersedeas bonds posted by McArthur-Pruitt, Incorporated, Reo Neches, Incorporated, and R. A. McArthur, Incorporated. Five wells of the defendant companies had been closed during the preceding week on charges of over producing a total of 98,409 barrels prior to enactment of the new proration law which was signed by the governor on April 10, 1933. Defendants in the case claim that proration orders issued before the new law became effective are invalid and that their wells should be permitted to take current allowables.

The Hall and Briscoe interests recently lost a decision before the corporation commission on a petition to permit the taking of 75 per cent of current allowable from two wells and to credit 25 per cent against overproduction. Cicero I. Murray, formerly in charge of military enforcement of proration orders in the pool, acted as attorney in the case. The wells which were closed in and overproduction charges are as follows: Hall and Briscoe's Stigall 1, 40,857 barrels; Mueller 1, 4558 barrels; McArthur-Pruitt, Incorporated's, Pruitt 1, 14,103 barrels; Rio Neches, Incorporated's, Armour 1, 19,615 barrels; and R. A. McArthur, Incorporated's Kammerdeiner 1, 19,276 barrels.

Commission Moves to Stop Waste of Oklahoma City Gas

Oklahoma City.—The Oklahoma Corporation Commission August 5, took action which is designed to greatly reduce the gas wastage which has gone on almost since discovery of the Oklahoma City pool. Under orders which become effective at 7:00 a.m., August 15, wells producing from the Wilcox sand zone and having gas-oil ratios in excess of 20,000 cubic feet, will be required to shut in until the ratio can be reduced to this figure. While the allowance of as much as 20,000 cubic feet of gas per barrel of oil is not generally considered efficient utilization of gas and gas energy, the new order is a forward step since many wells are operating under considerably higher gas-oil ratios. Based on potential gauges taken between April 17 and July 8, 38 Wilcox sand wells out of a total of 423 wells in the pool exceed 20,000 cubic feet per barrel. These range from a few cubic feet above the allowed limit to as much as 405,612 cubic feet per barrel of oil. The following table shows wells upon which gas-oil ratios must be reduced before allowed to produce after August 15 assuming that no radical changes have been made since the wells were gauged for potentials:

Company, Well—	New 4-Hour Gauge*	24-Hour Gas Volume	Gas-Oil Ratio
Anderson-Prichard, Little 1	561.25	86,118,750	25,490
Anderson-Prichard, Orphanage 1	44.75	53,437,500	199,022
Anderson-Prichard, Roush 1	75.69	98,825,000	217,609
Blackwell, Patterson 1	1,537.99	143,550,000	155,560
British-American, Holmes 1	185.66	49,150,000	44,122
British-American, Holmes 3	57.72	93,275,000	269,332
Century, Wheeler 1	777.00	101,032,500	21,671
Champlin, Central 1	267.75	42,300,000	26,331
Champlin, Naden 1	243.66	87,705,000	59,991
Dabney-Johnson, Foote 1	503.65	66,345,000	21,955
Harrell-Davis, Fish 1	121.48	141,038,000	203,103
I.T.I.O., Ivanhoe 1	93.33	16,960,000	30,287
I.T.I.O., Ivanhoe 3	241.02	46,965,250	32,477
I.T.I.O., Ivanhoe 4	97.33	47,950,000	82,109
I.T.I.O., M.K.&T. 3-A	272.58	48,080,000	29,412
I.T.I.O., M.K.&T. 6	462.72	183,300,000	65,875
I.T.I.O., M.K.&T. 7-A	560.76	188,700,000	55,971
I.T.I.O., M.K.&T. 8	218.12	135,625,000	100,917
I.T.I.O., M.K.&T. 2-B	109.52	190,450,000	289,825
I.T.I.O., Spannagel 1	504.11	82,550,000	27,183
I.T.I.O., Steven-Cory 1	114.67	24,950,000	40,351
Phillips, Berg 1	161.34	27,202,500	28,101
Phillips, Ciger 1	315.00	142,500,000	75,397
Phillips, Day 1	115.50	115,675,000	166,919
Phillips, Egermier 1	310.64	139,287,000	74,731
Phillips, Garver 1	82.53	20,934,000	42,276
Phillips, Haddix 1	144.10	25,065,000	28,990
Phillips, Highland 1	748.23	105,785,250	23,563
Phillips, Unruh 1	173.25	124,660,000	119,923
Refiners, Buchanan 1	614.25	86,265,000	23,407
Sinclair Prairie, School Land 8	36.56	88,975,000	405,612
Sinclair Prairie, School Land 15	405.93	81,175,000	33,329
Sinclair Prairie, Vencl 14	174.58	152,500,000	145,588
Skelly, Ainsworth 3	43.36	6,310,000	24,254
Springrose, O'Connor 1	991.71	145,900,000	24,520
Slick, Clegg 1	370.12	44,880,000	20,210
Slick, Frisco 2	419.80	79,017,500	31,371
Wrightsmith, Smith 2	120.75	25,100,000	34,645

*Multiply by six to determine gas-oil ratio.

Oklahoma First Reports Continue Well Scattered

Tulsa.—New work in Oklahoma more than held its own during the week when 32 first reports were made from 12 counties. Creek county led the state with nine new operations; five were reported from Hughes County; Osage and Wagoner Counties had three each; Carter, Kay, Pottawatomie and Seminole, two each; and Kingfisher, Lincoln, Okfuskee and Tulsa counties, one each.

Two corrections made from the Crescent area of Logan County were due to revision of the drilling plan. Gypsy Oil Company and Carter Oil Company, who drilled the Crescent discovery well, and several other operators in the area, had agreed to drilling the centers of 40-acre tracts. One company recently announced three 10-acre locations so it was decided that the field will be drilled on that plan. Locations already made in the centers of 40-acre tracts, therefore, were changed to the 10-acre center plan. The following first reports were made:

In Carter County, Carter Oil Company et al's W. H. Perkins 1, SW NW SW Section 3-1s-3w, rigging up rotary tools, and Tatums Oil Company's Lucas 1, SE C NE Section 14-1s-3w, rig.

In Creek County, Williams & Hammond's Pickett 1, SE NW NW Section 2-17n-8e, building rig; J. E. Crosbie, Inc.'s Casey 1, SW NW SE Section 3-17n-8e, rigging up; Williams & Ohair's Turner 1, NWC NE Section 21-17n-8e, drilling below 200 feet; Gibson et al, Jackson 2, NE C NW Section 3-18n-8e, location; Johnson Oil Refining Company's K. Saab 2, NWC NE Section 3-18n-8e, location; Bert Swift's Baunson 1, NE SW NW Section 3-18n-8e, spudding; Bay State Oil Company's L. Abraham 1, NEC SW Section 34-18n-8e, rigging up machine; Sheldon et al's S. Manuel 2, NE NW NW Section 15-19n-7e, machine; Johnson Oil Refining Company's Zogafoose 2, SE NW NE Section 1-19n-9e, drilling below 1610 feet.

In Hughes County, Troupe's Haskett 3, NE SW SE Section 15-7n-8e, rig on ground; Jackson's Moore 1, NW NE NE Section 22-7n-8e, machine; Royce's Walker 5, NW SE SW Section 22-7n-8e, drilling below 285 feet; E. O'Farrell's McClassen 1, SE NW NW Section 12-9n-8e, building rig; T. J. Lynch, McCoy 2, SWC NE Section 27-9n-10e, machine.

In Kay County, D. Morgan et al's Bush 1, NW NE NE Section 25-28n-4e, had rig on ground and Argo Oil & Gas Company No. 1, NW SE SE Section 30-25n-1w, was rigging up.

In Kingfisher County, Padeka Development Company had cellar dug on R. Frates 1, SW NE NE Section 16-15n-6w.

In Lincoln County, Amerada Petroleum Corporation announced N. Delong 1, NWC SW Section 12-13n-6e.

Correction is made on the location of two tests in the new Crescent area of Logan County, Continental Oil Company's McConnel 1, NE SE SE Section 28-17n-4w, digging pits, formerly was reported CSE SE, and Gypsy Oil Company et al's Walker 1, NE C Section 33-17n-4w, digging cellar, formerly was reported CNE NE.

In Okfuskee County, Mid-Continent Petroleum Corporation had rig on ground for Fields 3, SE C NE Section 3-11n-11e.

In Osage County, Clint Moore Estate's No. 1, NE C Section 34-21n-9e, Phillips Petroleum's No. 1, SWC NW Section 11-24n-6e, and Bay Oil Corporation's No. 1, NE NW NE Section 36-24n-7e, were all locations.

In Pottawatomie County, Mid-Continent Petroleum Corporation had rig on

Good Percentage Failures In Oklahoma Completions

Tulsa.—Oklahoma areas reported another increase during the week when 32 completions were made in 15 counties. The reports show 18 new oil wells with total initial of 8871 barrels, two dry gas wells with initial volume of 4,225,000 cubic feet and 12 dry holes for a total footage of 73,562 feet. The following reports were made:

Company, Well and Location	Init. Prod. Bbls.	Depth
Carter County—		
K. D. Oil, J. Burton 3, nwc sw 30-1s-2w	214	2464
K. D. Oil, J. Burton 4, swc nw 30-1s-2w	181	2441
K. D. Oil, J. Burton 5, ne se nw 30-1s-2w	552	2362
McFarland-Boggs, Carter 1 (Formerly reported Turner Morgan, Carter 1), swc nw 13-1s-3w	160	2506
Kanaco, Richards 3-A, ne se nw 25-4s-3w	*	2403
Cleveland County—		
Sooner O&G, Vandever 1, csw 15-7n-1w	*	3120
Creek County—		
Charles Giblin et al, S. Vance 1-A, ne sw sw 6-18n-7e	20	2640
Gled Oil, Escoe 3, csl se se 27-18n-8e	50	1335
F. L. Marrs et al, Wilson 2, se ne ne 34-18n-8e	90	1285
C. L. Sutton et al, Deere 2, se ne nw 7-19n-7e	*	3218
J. E. Abbot et al, M. Allen 1-A, nw ne sw 12-19n-9e	15	1240
Johnson O. R., E. Boyd 3, cel ne sw 29-19n-9e	15	2132
Hughes County—		
Troupe et al, Haskett 2, nw se se 15-7n-8e	75	1200
Mainard, Moore 3, cwl nw ne 22-7n-8e	60	1218
Shawnee O&G, Willingham 1, swc ne 24-7n-8e	*	1145
Logan County—		
Gypsy-Carter, McConnell 1, cne se 28-17n-4w	¶6 5720	6141
Muskogee County—		
J. S. Routt, Escoe 1, cnl se ne 17-13n-17e	*	2118
Noble County—		
Shell Pet., Mary Farr 1, cne se 19-20n-2w	*	5563
Champlin Refg., Graves 1, sw nw ne 21-20n-2w	*	5293
Okmulgee County—		
Baker Bros., Davis 5, cel se sw 11-13n-12e	¶4	1654
Osage County—		
Galt-Brown 2, ne sw ne 30-24n-8e	7	2465
Pawnee County—		
Krasne Drlg., Mitchell 2, cwl nw se 27-20n-9e (owdd)	¶¼	2054
Pontotoc County—		
Ed Moore, Gray 1, se c ne 25-5n-4e	150	2515
Delaney, Busby 1-A, sw se se 20-5n-8e	*	850
Pottawatomie County—		
Mid-Continent, Shrader 2, nwc 6-6n-5e (twin)	560	4073
Seminole County—		
Carter Oil, Rogers 6, nw ne se 2-8n-5e	942	4250
Tulsa County—		
Kistler, Carr 1-A, nw sw ne 23-18n-14e	20	1361
Johnson O. R., Jackson 2, cse se 19-19n-10e	40	2183
Wagoner County—		
Helvie & Stout, Derrisaw 2, ne nw se 24-18n-15e	*	1039
Sands Pet., Hall 2, ne c sw 24-18n-15e	*	1015
J. E. Martin, Drew 5, nw ne se 26-18n-15e	*	1089
Mays Drilling, Lovett 1, swc se 35-18n-15e	*	1100

*Failures; †Junked; ¶Million cu. ft. gas.

ground for Vieux 2, SE SW SE Section 31-7n-5e, as did M. F. Smith et al for Moore 1-A, NE SE NW Section 1-6n-6e.

First report of one new well and one old well deepening were made for Seminole County: Carter Oil Company's Rogers 7, NE NW SE Section 2-8n-5e, was digging cellar; Carter Oil Company's Campbell 6, SE NW SW Section 20-9n-6e, was deepened from 2685 to 2703 feet and swabbed 787 barrels of oil, 18 per cent water.

In Tulsa County, Boyd's Horn 3-A, NE SE NW Section 23-18n-4e, was drilling below 500 feet.

In Wagoner County, McIntire's Atkins 1, NWC NE Section 2-17n-15e, machine; Helvie and Stout's Derrisaw 3, NW NW SE Section 24-18n-15e, shut down at 800 feet; B. G. Goble's Goble 1-A, CS½ NE SW Section 35-18n-15e, drilling below 450 feet; Correction:—C. E. Cahill's Tiger 1, CNL SE NW Section 2-17n-15e, shut down at 800 feet, formerly reported McIntire's Tiger 1.

Locate Wildcat Test North-West of Burbank Production

Tulsa.—Six wildcat tests and one offset in a semi-wildcat area were added to the list of Oklahoma activity as the week came to a close. Several of the new tests bear special mention because of location. Among these is Dave Morgan et al's Cooper 1, NW NE NE Section 25-28n-4e, 3¼ miles northwest of production in the Burbank pool and approximately on the projected axis of that structure. Bartlesville or Burbank sand will be the objective. Amerada Petroleum Corporation was moving in materials for Long 1, CNW NW SW Section 12-13n-6e, two miles east of Mid-Continent Petroleum Corporation's Lille 1, completed for 13,000,000 cubic feet of gas from 4035 to 4068 feet in June, 1931. This well produced 75 barrels of heavy black oil from 4195 to 4259 feet but the showing was plugged off.

Western Oklahoma came in for a new play with Jadeka Development Company's Frakes 1, CSW NE SW Section 6-15n-6w, four miles southeast of the town of Kingfisher in southern Kingfisher County, and 17 miles southwest of the new Crescent pool in Logan County. This test is based on the expected extension of a trend which parallels the Nemaha Ridge and has yielded several pools farther north.

In Kay County, Burton LeWright et al's Leseman 1, SW NE SE Section 4-28n-2e, about four miles northwest of production in the Newkirk pool, had cellar excavated. Blauner and others' Maple 1, NE NW SE Section 20-27n-4e, was drilling below 1565 feet.

Acre et al's Acre 1, in Alfalfa County, CSW NE Section 14-24n-11w, an old well deepening from 5502 feet, was drilling below 5660 feet.

In the Wentz area of Noble County, one new test was added, The Texas Company et al's Snodgrass 1, CSW NE Section 7-20n-2w, moving in material. Sinclair Prairie Oil Company's Jerome 1, SWc Section 15-20n-2w, was plugged back to 4970 feet and shut down. Shell Petroleum Corporation et al's Magney 1, CSW SW Section 17-20n-2w, was drilling below 253 feet. Continental Oil Company's Hafner 1, CEL NE SW Section 18-20n-2w, set 15-inch at 320 feet, had top of the Harrington lime at 1115 feet and was drilling below 2230 feet. Shell Petroleum Corporation et al's J. Bolay "A" 1, CNE NE Section 18-20n-2w, had rig on ground; their O'Hern-Miller 1, CSE SE Section 18-20n-2w, had cellar excavated and was moving in material. The Texas Company's Maxwell 1, CEL NE NW Section 18-20n-2w, was drilling below 1720 feet. Stanolind-Amerada's Frederick 1, CSW SE Section 28-20n-2w, was still a location but the same operators' D. L. Kolb 1, CNW NE Section 33-20n-2w, was drilling below 2220 feet.

In the Crescent area of Logan County, Continental Oil Company's south offset to the discovery well, McConnell 1, CNE SE SE Section 28-17n-4w, had cellar excavated. The discovery well, Gypsy-Carter's Miller 1, CNE SE Section 28, was shut in. Sinclair Prairie Oil Company's Phillips 1, NE NW Section 28-17n-4w, had rig on ground, and J. W. Shaffer 1, NE SW Section 28-17n-4w, was building rig. Gypsy-Carter's T. Walker 1, CNE NE Section 33-17n-4w, two locations south of the discovery well, was digging cellar.

In Lincoln County, J. Garfield Buell's Smith 1, NW SE Section 26-16n-6e, was rigging up rotary tools and drilling a water well.

H. E. Rapp's Price 1, in Oklahoma County, CE½ NE SW Section 19-14n-3w, was drilling below 2490 feet.

In Muskogee County, J. S. Routt et al's Escoe 1, CNL SE NE Section 17-13n-17e, had Wainright sand at 2030 to 2033 feet, and was dry and abandoned at 2118 feet in black shale.

Sinclair Prairie Oil Company's Terney 1, in Pottawatomie County, SE Section 2-11n-6e, was drilling below 1030 feet. Carter Oil Company et al's Community-Ray 1, CW½ NE NE Section 23-11n-6e, was drilling below 868 feet.

Carter Oil Company's Community-Canard 1, in Seminole County, CS½ SW SE Section 35-11n-6e, swabbed 621 barrels of oil and 165 barrels of water.

In Beckham County, Pattee Royalty Company's Goose Tree 1, SW SE SW SE Section 32-10n-23w, set six-inch to 3030 feet and was shut down at that depth for liner.

In Hughes County, E. F. O'Farrell announced McClassen 1, SE NW NW Section 12-9n-8e, a rig. Scruggs et al's Black 1, NEc Section 13-9n-10e, also was a rig. Chamberlain et al's Scott 1, NE SE NW Section 23-6n-8e, had slush pits dug.

In Washita County, McWherter & Bose, Hale 1, SW SE SE Section 28-8n-19w, was drilling below 185 feet.

Moffett & Hall's Jone 1, in Pittsburg County, CNE NW Section 14-8n-14e, was fishing at 2710 feet.

In Kiowa County, King & Moose' King 1, SE SW NW SW Section 27-7n-20w, was shut in after making an estimated 2,000,000 feet of gas at 973 feet.

In Seminole County, Felmlee et al's Bowlegs 1, SE NE SW Section 1-7n-7e, was shut down at 800 feet. Stewart & Egan's Sanderson 1, NE NE SW Section 27-6n-5e, was drilling below 1800 feet. M. T. Smith et al announced a new test in Seminole County, Moore 1, NE SE NW Section 1-6n-6e, rig on ground. Armstrong et al's Diamond 1, NE SE SW Section 8-6n-7e, cored 4034 to 4044 feet in dolomite and was shut down for casing.

In Pottawatomie County, Hershall-Payne's Lovelace 1, CSW SW NW Section 27-6n-4e, was setting six-inch casing to 3620 feet when it collapsed at 800 feet.

Reports on Pontotoc County wildcats were as follow: McGee et al's Newbern 1, SW NE Section 31-5n-4e, rig; Gilbert et al's Starritt 1, NW NW SE Section 28-4n-6e, waiting on cement to set; Williams et al's Kroth 1, NE NE SE Section 33-3n-4e, shut down for orders; Sledge et al's Wooley 1, SW SE SW Section 22-2n-7e, set 15-inch casing at 225 feet and was drilling below 315 feet; H. L. Wirrick's Fee 1, SE SW Section 29-2n-7e, had top of the Cromwell series at 2555 feet with a good show of oil at 2641 feet, had base of the Cromwell at 2706 feet and was drilling below 2815 feet in shale; Choctaw Oil & Gas Company's Thompson 1, SW NE SW Section 1-1n-7e, was drilling below 1370 feet.

In Stephens County, J. W. Madison announced Tussy 1, NW NE SW Section 24-1n-4w.

T. E. Revells et al's Wolfe 1, in Murray County, NEc Section 18-1n-2e, was drilling below 400 feet.

Southern Oklahoma

In Tillman County, Emenhiser et al's Pace 1, CSW Section 3-4s-17w, was shut down at 3280 feet. Gypsy Oil Company's Petcher 1, NWc Section 26-4s-15w, was cleaning out at 780 feet, total depth 2764 feet.

In Stephens County, J. H. Everetts' Crane 1, SWc Section 12-3s-6w, was a rig.

Kansas Stops Practice of Making Up Back Allowable

Wichita, Kansas.—In an order signed August 3, 1933, the State Corporation Commission of Kansas eliminated the practice of making up underproduction by the plugging back or drilling deeper of wells in prorated areas. In many instances in the past operators have accrued underproduction from one zone or horizon and upon exhaustion of production have drilled deeper or plugged back and made up such underproduction from a different producing horizon. The commission held that abandonment of any producing horizon and the deepening or plugging back of any well shall be considered a new well for proration purposes and entitled to allowable from the date of recompletion, thereby automatically cancelling all previous underproduction.

25 Operations Appear On Kansas First Report List

Wichita, Kansas.—Harvey County led the state in an expansion of activities with eight first reports followed by McPherson County with five. The Cuningham or Miles pool of Kingman County also was affected by the general pick-up which has been noted during the past month with three new operations. With the exception of Rice and Woodson Counties, which each had two starts, all other counties reported during the week had one each for a state total of 25 first reports.

They were as follows:

In Barton County, Atlantic Oil Producing Company announced location of Snyder 1, CNE SW Section 15-20s-13w.

McKnabb's Hutto 4, was a new location in Cowley County, NE SE NE Section 22-32s-4e.

In Ellis County, Davis et al had rig timbers on Wealing 1-B, SE NW NE Section 1-13s-16w.

Correction is made of a test in Greenwood County, Abe Markus' W. O. Smith 1, SW NW NE Section 6-24s-12e, drilling below 1220 feet, formerly reported in SW NW NW Section 5-24s-12e.

In Harvey County, Holbert Oil Company and Shell Petroleum Corporation Gengies 1, NE C SW Section 8-24s-1e, location; Empire Oil & Refining Company's Froese 1, SE C Section 7-22s-3w, location; Derby Oil Company's Schmidt 4, NE SW NW Section 17-22s-3w, rig; Skelly Oil Company's Schmidt 4, NW SW NW Section 17-22s-3w, cementing 15½-inch casing at 316 feet; Sinclair Prairie Oil Company's Neufeldt 2-A, CE½ E½ SE Section 18-22s-3w, location; Mid-Kansas Oil & Gas Company's Duerksen 7, NE C Section 19-22s-3w, location; Producers & Refiners Corporation's Martens 5, SW NW SE Section 19-22s-3w, building rig; Mid-Kansas Oil & Gas Company's Schelenberg 1, NE C NW Section 30-22s-3w, location.

Skelly Oil Company announced three tests in Kingman County: Interurban Realty Company 1, CNL SW Section 30-27s-10w, F. Miles 3, CWL NE Section 30-27s-10w, and Ratcliff 2, CSL NW Section 30-27s-10w.

Five first reports were made for McPherson County as follow: Detrick & Youker's Sellers 3, SWC Section 19-19s-1w, location; Paramount Petroleum et al's Steinkirchner 1, NE SE SE Section 25-19s-1w, location; Helmerich-Payne's Russell 2, NE C Section 23-19s-2w, location; Regina Petroleum's Vogts 1, CSE SE Section 8-20s-1w, rig; Slick-Pryor and Lockhart's S. Stucky 3, CW¼ W½ SW Section 27-20s-3w, location.

In Reno County, Hopper et al announced R. E. Miller 1, NWC SW Section 25-24s-8w. Correction is made on Watchorn Oil & Gas Company's Soper 1, CNE NE Section 31-25s-4w, rig, formerly reported NE C NE.

In Rice County, Slick-Pryor and Lockhart's Herzog 2, NW NE SE Section 27-18s-10w was a location. Hipple et al's Reiney 5, NW SE SE Section 3-21s-6w, also was a location.

Correction is made on Faulkner et al's Underwood 1, in Sedgwick County, CSW SW Section 23-25s-1w, rig, formerly reported CNE.

In Woodson County, Dyer's Wolf 1, SW SE NW Section 4-24s-14e, had machine on ground. Tom Palmer et al's Naylor 1, NE SW NE Section 14-24s-14e, was spudding.

Six New Wells in Kansas Initial 2,999 Barrels

Wichita, Kansas.—Rice and Harvey Counties in the western portion of the state contributed 2839 barrels of the total of 2999 barrels total initial production reported from the state during the past week. The reports included six new oil wells and one dry hole for a total footage of 21,030 feet, all in new hole.

Completions of the week are tabulated below:

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton County—		
Rankins, Sooey 1, csw ne 34-18s-12w	*	3582
Greenwood County—		
Plains Petroleum, Terchgreseber 5, ne nw ne 11-25s-8e	50	2338
Harvey County—		
Sinclair Prairie, Neufeldt 2-B, se c ne 18-22s-3w	¶7-210	3449
Rice County—		
Slick-Pryor & Lockhart, Herzog 1, ne c se 27-18s-10w	650	3258
Vickers Petroleum, R. J. Specht 1, se c ne 20-20s-10w	1091	3354
Rodgers et al, Reiney 4, se nw se 3-21s-6w	888	3397
Woodson County—		
Harper et al, Figgs 4, se c nw 28-23s-14e	110	1652
Dwyer et al, Wolf 1, nwc 9-24s-14e	lcn.	abd.

*Failures; †Junked; ¶Million cu. ft. gas.

Four Addition Wildcats Get Underway in Kansas

Wichita, Kansas.—The Kansas wildcat list was expanded by the addition of four new tests bringing total number of exploratory operations to 22. One of the most interesting of the group announced during the week is Atlantic Oil Producing Company's Schneider 1, CNE SW Section 15-20s-13w, three miles south of the town of Great Bend in southern Barton County and 11½ miles from the nearest production. Barton County is now the scene of four active wildcat tests all of which will be closely watched.

In Sumner County, Deal Oil & Gas Company's Tompkins 1, SWc Section 26-33s-1e, set six-inch at 3730 feet, the total depth and was cleaning out.

E. Yarnell et al's Spear 1-A, in Cowley County, SE NE NE Section 31-33s-6e, was shut down at 1400 feet.

In Kingman County, D. R. Lauck et al's Church 1, SE SW NE Section 10-28s-6w, was drilling below 1800 feet.

In Pratt County, Ninnescah Oil & Gas Company's Hardesty 1, SW SE SE Section 28-27s-11w, was pulling five-inch casing to plug back and use acid on shows.

In Greenwood County, Miller & Gaines' Elliott 1, CN½ NE NW Section 18-26s-9e, was spudding.

Watchorn Oil & Gas Company's Soper 1, in Reno County, NEc Section 31-25s-4w, was rigging up. Mylius et al's Patten 1, SE NE Section 35-23s-5w, had rig on ground.

In Butler County, Hartman Oil Company et al's McCann 1, SE SW NW Section 7-25s-3e, had a hole full of water at 2025 to 2035 feet, set 10-inch at 2044 feet, had 10 barrels of water at 2135 feet, and was drilling below 2175 feet. Marylyn Oil Company's Harsh 1, NE SW Section 33-23s-8e, set eight-inch at 1695 feet and was drilling below 2000 feet.

In Harvey County, Holbart Oil Company announced Gingrass 1, NE SW Sec-

tion 8-24s-1e, moving in material. L. H. Wentz had spudded 60 feet on Bestvater 1, SW SE SW Section 8-22s-1e.

In Woodson County, Tom Palmer et al announced Naylor 1, NE SW NE Section 14-24s-14e, drilling below 65 feet.

National Refining Company et al's Smith 1, in Finney County, CSE SW Section 2-23s-29w, was still a location.

Reports on Rice County tests were as follow: Garden et al's Thodel 1, CNW NW Section 11-21s-7w, had Kansas City lime at 2870 feet, a hole full of water at 2965 to 2982 feet, and a show of oil and a hole full of fluid at 3142 to 3149 feet.

In Barton County, Skelton et al's Ott 1, CSE SE Section 16-19s-14w, was cleaning out at 3563 feet to recement. Helmrich & Payne et al had set 20-inch casing at 85 feet on Eveleigh 1, CSW SE Section 13-18s-13w; Ranken et al's Sooey 1, CSW NE Section 34-18s-12w, had a hole full of water at 3538 feet, total depth of 3582 feet, may plug back and acidize.

In McPherson County, Regina Oil & Gas Company announced Vogts 1, CSE SE Section 8-20s-1w, a rig; Paramount Oil Company et al announced Stein-Kirchner 1, NE SE SE Section 25-19s-1w; Clum et al's Nelson 1, CSE NW Section 12-18s-4w, set six-inch at 3544 feet and was drilling below 3564 feet with a hole full of water.

In Marion County, Hutchinson Oil & Gas Company's Miller 1, NWc Section 6-17s-3e, set eight-inch at 2022 feet and was drilling below 2360 feet.

Krueger et al's Rathburn 1, in Rooks County, SE NW SW Section 14-9s-16w, was drilling below 2300 feet.

East Texas Production Decline Shown in Official July Report

Austin, Texas.—The East Texas field's daily average oil production declined during July, according to records of The Texas Railroad Commission. Dropping from 835,172 barrels to 653,554, an average decrease of 200,000 barrels per day was shown.

There were three contributing causes. The commission had suspended back-allowable permits. As an example of the effect of this revocation, in June a total of 782,252 barrels were run under these permits. Under federal orders shipments of oil by tank cars without approved tenders were stopped, and the daily average run was but 35,809 barrels as compared with 75,024 barrels daily for the preceding month. A cut in the field allowable was brought about. This was reduced from 15 per cent of the hourly potential prevailing the first 16 days of June to 10 per cent.

Considerable reduction in overproduction was accomplished. The June daily average of 115,729 barrels went down to 79,820 during July. A decided cut in the field allowable caused daily production in June of 719,443 barrels to decrease to 573,734 barrels in July.

There was a drop in movements by pipe lines. July dropped to a daily average of 557,450 barrels as against the 691,498 per-day figure in June.

There was an increase in runs to refineries. During June the daily average was 68,482 barrels while in July it gained despite protests from refineries that they could not obtain sufficient oil to maintain operations. Noticeable in this connection was a number of refinery shut-downs, caused by lack of crude.

Pipe line storage was off, a total decrease of 285,934 barrels being reported in July. Remaining in storage was a total of 3,617,705 barrels. The preceding month's output had created a total increase of 5,051 barrels in this storage.

Allowable for July included 318,773 barrels in lease storage on the first of the month; 7,543 barrels produced under potential tests made on new wells, and 11,650 barrels from shallow wells.

Magnolia's Crude Stocks In Oklahoma Increased

Tulsa, Okla.—Crude stocks held by Magnolia Petroleum Company in Oklahoma were increased during July for the second consecutive month, bringing the total up to 7,300,535 barrels on August 1. The company's stocks increased at average rate of 3423 barrels daily in June, and at rate of 5118 barrels daily in July.

Monthly Recapitulation of Daily Pipe Line Gauging Report—East Texas Field

From 7 a.m. July 1, 1933 to 7 a.m. August 1, 1933

COMPANY	Stock on Hand 7 a.m. 7-1-33	Receipts for Period	Average Receipts Period	Total Deliveries Period	Average Deliveries Period	Deliveries Out of Field Period	Average Deliveries Out of Field	Average Uncorrected Metered Bbls.	Stock on Hand 7 a.m. 8-1-33
Arkansas P. L.	36,158	491,346	15,850	470,505	15,178	403,383	13,012	13,135	56,999
Atlantic P. L.	280,791	1,141,535	36,824	1,195,833	38,575	1,061,247	34,234	33,799	226,490
Atlas P. L.	234,598	578,108[1]	18,649	768,349[1]	24,785	768,349[1]	24,785	no meter	44,319
Gulf P. L.	87,831	1,707,042	55,066	1,687,710	54,442	1,687,710	54,442	53,057	106,644
Humble P. L.	355,442	3,090,313	99,688	3,091,761	99,734	3,091,761	99,734	96,197	353,116
Humble Crude Oil Dept.	141,177	1,617,110	52,165	1,643,688	53,022	none	none	none	114,599
Illinois P. L.	14,088	348,566	11,244	344,716	11,120	230,464[2]	7,434	6,841	17,928
Liberty P. L.	16,267	401,714	12,959	404,254	13,040	404,254	13,040	12,860	13,686
Magnolia P. L.	456,152	2,205,119	71,133	2,198,971	70,935	2,198,971[3]	70,935	65,293	459,496
Shell P. L.	268,094	1,264,514	40,791	1,263,651	40,763	1,067,405	34,439	35,227	268,957
Sinclair-Prairie P. L.	60,218	1,859,483	59,983	1,796,397	57,948	1,796,397	57,948	57,624	123,304
Sun-Yount-Lee P. L.	227,906	1,729,767	55,799	1,648,139	53,166	1,315,692	42,442	42,361	309,534
Texas Empire P. L.	100,310	1,863,611	60,116	1,905,614	61,471	1,905,614	61,471	61,232	57,635
Texas P. L.	952,103	1,760,190	56,780	1,807,748	58,314	1,349,555	43,534	44,147	903,234
Tidal P. L.	539,702	835,279	26,944	953,505	30,758	none	none	none	420,409
Toronto P. L.	132,802	304,033	9,808	295,489	9,532	none	none	none	141,346
Total Pipe Line Barrels	3,903,639	21,197,720	683,799	21,476,330	692,783	17,281,002	557,450	521,773	3,617,705

Detail of Source	Monthly Total	Daily Average
Total barrels leaving field by pipe lines	17,281,002	557,450
Total barrels leaving field by tank cars	1,110,070	35,809
Gauged and estimated barrels to refineries	2,155,093	69,519
Total actual and estimated barrels leaving field	20,546,165	662,778
Pipe line storage Decrease	285,934	9,224
Total deliveries Less storage decrease	20,260,231	653,554
Allowable to be run for period	17,785,743	573,734
Over-Delivery for period	2,474,488	79,820

[1]Figures for the first 13 days are estimated.

[2]Includes 120,314 barrels delivered from Henderson to center—not metered.

[3]Includes an estimated amount of 12,105 barrels delivered to Atlantic Main Line—not metered.

Note:—Allowable includes 318,773 barrels in lease storage as of July1, and tendered to be run during this period; 7,543 barrels resulting from potential tests and tendered to be run during this period; and an estimated figure of 11,650 barrels of salvage oil (shallow well production).

Second Buffalo Structure Test Near Decisive Depth

Tyler, Texas.—A second test on the Buffalo structure in northern Leon County is approaching a decisive depth with key formations checking about 200 feet higher on structure than the first try for production in the Woodbine sand horizon. Both tests are on a 17,500-acre unit block held by eight major and independents, with Shell Petroleum Corporation, owner of 50 per cent, in charge. Beggs 1 was logging soft shale at 5500 feet last week, and has recorded a thinning of formations since topping the Pecan Gap chalk at 4074 feet as compared to the group's first test on the Phillips tract. Phillips 1 was abandoned last February at 6300 feet in salt water after passing up a small volume of live oil in Woodbine sand at 6054-68 feet and at 6146-57 feet, with a surface elevation of 423 feet. The new test is about 2¼ miles south by east of Phillips 1.

Ed W. Bateman et al's A. C. Carlisle 1, a wildcat in the northwest part of Leon County, was coring Eagleford shale at 5880 feet late last week. This test has taken in 508 feet of the shale, and appears to have a thick section, as Phillips 1, located on the Buffalo structure, logged only 484 feet of Eagleford shale between the base of the Austin chalk and the top of the first Woodbine sand zone.

Wm. C. McGlothlin, American-Liberty Oil Company et al's Henderson County wildcat on the H. English 950-acre tract, about three miles west of Athens, appeared to be checking about normal on key formations with previously drilled dry holes in the area. English 1 logged Pecan Gap chalk at 2515-2740 feet, and Austin chalk at 3501-3952 feet, with a surface elevation of 441 feet.

East Texas Allowable Output Given Increase

Kilgore, Texas.—Allowable production in the East Texas field was advanced to about 598,500 barrels daily from 10,350 flowing and pumping wells effective midnight August 7 by the Texas Railroad Commission. The official output of the field had been 573,272 barrels daily since July 16, although actually well above 600,000 barrels daily due to proration violations and special production concessions.

A supplemental proration schedule in printed form was issued by the commission on wells sharing in the increased allowable, while wells not included in this supplement are supposed to continue to produce the quota allocated on the July 16 schedule.

The hike in production was largely due to the regauging of wells for potential ratings, while a number of clerical errors were rectified where wells were found to be spotted in the wrong production contours.

The ban on producing back allowable production continues in effect, but special concessions are made to operators having a production deficit due to unintentional errors made in fixing well allowables.

East Texas Completions Reflect Drilling Rush

Tyler, Texas.—Having averaged five new oil producers daily for the past month, the East Texas field is scheduled to register a higher rate of completions through general revival of drilling. Nearly 100 rotary rigs are now in active operation in the field, or almost triple the number in service a few months ago. Major and independents are taking part in this new work, and all sections of the field are sharing in the activity.

Anticipation of a substantial hike in crude prices is the principal incentive behind the new drilling campaign, while many of the majors are endeavoring to bring up their well density to a level that compares favorably with the average of 11.05 acres to the well credited to the field.

Six major companies account for an aggregate of about 75 of the new operations started, or about to get underway. Mid-Kansas Oil & Gas Company and Tide Water Oil Company each have 16 operations listed. The former is drilling on three tests, with derricks and rigs up on seven others, while it has six locations. Tide Water Oil Company is operating six rigs, having derricks up for seven others, and locations for three more. Magnolia Petroleum Company is working five of its rotaries, with derricks up for two more tests, while locations have been staked for five more as a move towards matching the 60 direct offsets neighbors have gotten the jump on. Sun Oil Company has six locations, and a pair of drilling tests as well as a pair of derricks awaiting rigs. Atlantic Oil Producing Company and The Texas Company are also active.

Detailed list of completions for the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Blackwell O. & G. Co., S. Stone 8, (53-ac)	7800	3658
Bristol-Duncan & White, Womack 1	6500	3622
Tast Texas Oil Ref. Co., W. W. Holland 2 (18-ac)	2000	3759
Hunt Prod. Co., B. F. Maxwell 3 (23½-ac)	8500	3775
Mid-Kansas O. & G. Co., M. M. Cross 39 (814-ac)	6500	3627
Stanolind O. & G. Co.-Pure Oil Co., W. H. Siler 41 (949.6-ac)	2500	3611
Stroube-Stroube & Collins, R. F. Russell 2 (17½-ac)	7000	3792
The Texas Co., M. Blackwell 10 (100-ac)	2000	3708
Kilgore Area—		
Adams & Lyles, L. Howard 5 (49.7-ac)	7700	3648
Bass & Dillard, S. Carr 2-B (9.11-ac)	7500	3503
Bay Oil Corp. et al, W. P. Moore-Shell 5 (106.93-ac)	8500	3767
W. P. Moore-Shell 6 (106.93-ac)	9600	3740
B. B. Peterson 6 (80.65-ac)	10,500	3620
Houston Oil Co., M. B. Hughey 7	9000	3523
Jones & O'Brien, Inc., Hughey-Ross 14 (127-ac)	5000,3540	
Reserve Pet. Co., A. Godfrey 3-A (10.12-ac)	10,000	3598
Sun Oil Co., J. R. Beall 11 (180-ac)	9500	3620
Tide Water Oil Co., H. P. Leverett 6	10,000	3676
Yeager et al, L. Howard 2	8000	3571
Longview Area—		
Almeda Oil Co., Doby 3 (21-ac)	7400	3733
Atlantic Oil Prod. Co., P. C. Castleberry 6 (37-ac)	7500	3665
J. M. Moore 42 (447¼-ac)	10,000	3541
Barnsdall Oil Co.-Sun Oil Co., L. Bingham 10 (99-ac)	9600	3652
East Texas Oil Ref. Co., T. W. Tuttle 4 (55-ac)	9000	3575
Fran White 8 (96-ac)	11,000	3596
F-H-E Oil Co., B. C. Christian 10 (87-ac)	10,500	3655
Foundation Oil Co., L. Willis 3 (13-ac)	8600	3640
Gulf Prod. Co., J. C. Judge 37 (518-ac)	9000	3525
W. L. Pickens (Rec) et al, E. Hoyt 1	15,000	3584
Rancho Oil Co., H. W. Moyers 5 (50-ac)	8500	3620
Roeser-Pendleton, Inc., D. D. Sheffield 5 (49-ac)	6500	3646
Rowan-Nichols Oil Co., B. C. Todd 3-B (25-ac)	15,000	3646
Stanolind O. & G. Co.-Simms Oil Co., P. McGeorge 6 (100-ac)	11,000	3560
Steen Drlg. Co., A. R. Loden-Shell 6 (56-ac)	12,000	3700
Twin Oil Co., M. Bonner 8 (148-ac)	4000	3626

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Permits Continue High Rate; Under Last Year

Austin, Texas.—Although somewhat less numerous than in the previous week, well-drilling permits granted by the state during the past week were above normal in number, aggregating 285. That figure compared with 362 the previous week, and 256 the week before that.

That the 285 permits for the new week were relatively many is shown by the fact the permits have averaged only about 130 per week for the whole year 1933.

The 285 completions of the past week brought the total number issued during 1933 up to 4147, as compared with 5540 by the same date in 1932. The difference between the two years is due largely to a gradual recession of drilling in the big East Texas field, which was at its height in 1932.

Details of the locations of wells included in the past week's list of drilling permits are given below:

In Archer County the following permits were granted: Texas Plains Oil Company, Wichita Falls, J. A. Garvey A-3 (200-ac), TE&L Survey 1856, 300 feet west of No. 1. Kisk Oil Company, Wichita Falls, R. O. Priedeaux 9 (113-ac), J. J. Hand Survey, 150 feet from west and 450 feet from south line of lease; R. O. Prideaux 10 (113-ac), 300 feet north of No. 8. Gordon T. West, Wichita Falls, M. B. Ray 2 (40-ac), Section 150, Wm. Henry Survey, southwest corner of lease; 3, northwest corner of lease; 1, 150 feet from south and west lines of lease. The Texas Company, Wichita Falls, Young-Langford 1 (60-ac), Section 127, Club Ranch Survey, 200 feet from north and east lines of section; Amer. Refg. 1 (100-ac), Section 126, Club Ranch Survey, 200 feet from east and 650 feet from south line of section; L. F. Wilson 1 (63-ac), Section 116, American Tribune Survey, 200 feet from west and 650 feet from south line of lease. Shappell Oil Company, Wichita Falls, W. H. Portwood 7 (40-ac), TE&L Survey 1581, 300 feet east of No. 6. Fain-McGaha Oil Corporation, Wichita Falls, Fee B 4 (60-ac), DCSL Survey No. 3, 550 feet from north and 200 feet from west line of Block 2. S. V. White, Wichita Falls, W. H. Portwood 1 (160-ac), TE&L Survey 1587, 833 feet from east and 1050 feet from south line of lease. Anderson & Daubert, Olney, C. L. Abercrombie 4 (84-ac), Block 157, Club Ranch Survey, 2301 feet from west and 563 feet from south line of lease. Burns & Long, Wichita Falls, B. H. York 3, (280-ac), TE&L Survey 1583 300 feet east of No. 2.

In Bastrop County the following permits were granted: F. C. Dodson, Lockhart, P. Goertz 1 (40-ac), J. G. Lentz Survey, 1100 feet from northeast and 725 feet from northwest line of lease. Humble Oil & Refining Company, Houston, E. Wilhelm 8 (222-ac), S. Wolfenberger Survey, 350 feet from east and 335 feet from south line of lease. Marts & Beaven, Dallas, C. L. Riddle 1 (76-ac), Maxmillian Survey, 200 feet from northwest and 190 feet from southwest line of lease; A. Reyes 1A, (20-ac), A. Litton Survey, 600 feet from south and 150 feet from west line of lease; A. Reyes 1B (10-ac), A. Litton Survey, 150 feet from north and 450 feet from east line of lease.

In Bexar County the following permits were granted: Phillips Oil & Gas Company, San Antonio, T. R. Dillon 1 (100-ac), M. Luna Survey No. 3, northeast corner of lease. Motes-Campbell Company, San Antonio, S. L. Stumberg 2 (140-ac), J. Christopher Survey 53, 450 feet from north and west lines of lease. R. J. Kieffer et al, San Antonio, E. Ruiz 1 (82-ac), F. Roland Survey, 155 feet from west and 210 feet from south line of lease.

In Brown County the following permits were granted: The Texas Company, Cisco, W. S. Johnson, 8 (55-ac), W. S. Johnson Survey, 150 feet from south and east lines. C. L. Eshleman, Brownwood, E. F. Chambers 1 (114-ac), Section 4, E. T. Ry. Survey, 468 feet from east and 2706 feet from south line of lease.

In Chambers County the following permits were granted: Mills Bennett Production Company, Houston, E. W. Barber C 2 (10-ac), H. Griffith Survey, 100 feet from east and 30 feet from south line of lease; Monongahela B 2 (114-ac), Wm. Bloodgood Survey, 1000 feet from south and 800 feet from west line of lease; J. F. Wilburn 9 (40-ac), H. Griffith Survey, 777 feet from west and 190 feet from north line of lease; E. W. Barber A 5 (54-ac), H. Griffith Survey, 500 feet from south and 100 feet from east line of lease; Gulf Fisher 6 (23-ac), Wm. Bloodgood Survey, 666 feet from west and 30 feet from north line of lease; E. H. Fisher 3 (64-ac), Wm. Bloodgood Survey, 420 feet from east and 710 feet from south line of lease; 4, 790 feet from east and 885 feet from south line of lease; Monongahela B 3, (114-ac), Wm. Bloodgood Survey, 50 feet from south and east lines of lease.

In Callahan County the following permits were granted: Matson Drilling Company, Fort Worth, Radford 11 (240-ac), D&D Survey, 1600 feet from west and 400 feet from south line of lease.

In Clay County the following permit was granted: J. W. Culbertson, Wichita Falls, H. Kenser 1 (150-ac), J. C. Bailey Survey, 780 feet from north and 1550 feet from west line of lease.

In Cooke County the following permit was granted: Houston Hutton, Muenster, J. Walterscheid 1 (40-ac), C. R. B. Anderson Survey, 150 feet from west and 450 feet from south line of lease.

In Colorado County the following permit was granted: Plymouth Oil Company, Texon, J. E. Broussard 1 (640-ac), H. Dufner Survey 843, 426 feet from north and east lines of lease.

In Coleman County the following permits were granted: Continental Oil Company, Fort Worth, M. T. Overall 13, Section 700, J. C. Barclay Survey, 200 feet from east and 100 feet from north line of lease. The Texas Company, Cisco, L. Small 1 (120-ac), H&G N Survey 282, 150 feet from south and west lines of lease; L. J. Wilson 1 (78-ac), J. C. Barclay Survey 700, 150 feet from south and west lines of Block 12 of lease.

In Duval County the following permits were granted: South Coast Oil Corporation, Houston, C. M. Robinson 1 (640-ac), Section 114, GH&H Survey, 2310 feet from north and west lines of section. Humble Oil & Refining Company, Houston, C. W. Hahl 9 (320-ac), Section 360, W. N. Seago Survey, 938 feet from west and 330 feet from south line of E½ of section. F. J. Gravis, Laredo, C. K. Gravis 1 (40-ac), NE¼ No. 2 Survey, 330 feet from northeast and 1320 feet from southeast line of lease. Central Producers, Inc., Laredo,

Tuck-Johnson 7 (40-ac), SE¼ SW¼ of Survey No. 42, 330 feet from south and west lines of lease; 8, 330 feet from north and 660 feet from east line of SW¼ SW¼ of lease; 9, 330 feet from south and west lines SW¼ SW¼ of lease. Sun Oil Company, Dallas, Cuellar 6, (164-ac), Section 576, BS&F Survey, 660 feet southwest of No. 5. F. J. Gravis, Laredo, Gravis 1 (40-ac), Section 88, 2100 feet from west and 150 feet from north line of section. A. L. Edington, Laredo, J. A. Lundell 2 (80-ac), Section 48, 200 feet from north and east lines of S½ SE¼ of lease. The Texas Company, Houston, M. Vela 1 (419-ac), M. Vela Survey 72, 330 feet from north and west lines of section. Russ Petroleum Company, Dallas, E. Riley 2 40(-ac), Section 46, 330 feet from north and east lines SW¼ NW¼ of lease; 3, 330 feet from south and east lines of SW¼ NW¼ of lease. The Texas Company, Houston,Duval Ranch A4 (160-ac), P. Hernandez Survey 574, 413 feet from southwest and 330 feet from southeast line of lease. W. A. Smith, Houston, C. Holzapfel 1, Section 42, west central part of lease. Lundell Brothers, Laredo, Fee 3 (80-ac), Section 60, 1650 feet from east and 150 feet from south line S½ NE¼ of lease; Fee 1 (160-ac), Section 60, 150 feet from north and east lines of SW¼ of lease; Fee 2 (40-ac), Section 60, 150 feet from south and east lines of NE¼ NW¼ of lease. Brooklyn Oil Company & Newton, Laredo, J. P. Akin 1 (40-ac), Section 184, 330 feet from north and 165 feet from west line. O. W. Killam, Laredo, J. P. Akin 1 80(-ac), Section 184, 165 feet from north and west lines W½ SW¼ of lease. Smith & Anchor Oil Company, Houston, W. F. Afflerbach 1 (40-ac), Section 342, 150 feet from south and east lines of NW¼ of lease.

In Eastland County the following permit was granted: W. M. Morris, Ranger, S. R. Hunt 1 (80-ac), Block 2, McL.C.S.L. Survey, 900 feet from south and 600 feet from east line of lease.

In Fort Bend County the following permits were granted: Gulf Production Company, Houston, T. R. Booth 10 (452-ac), Jno. Rabb Survey, 968 feet east of No. 8 of lease. Wes Len Pet. Company, Houston, O. Mays 1 (14-ac), S. Kennedy Survey, 300 feet from south and 228 feet from east line. The Texas Company, Houston, R. A. Wolters 5 (100-ac), S. Kennedy Survey, 300 feet from north and east lines of lease. H. M. Naylor, Houston, S. B. Gehr 2 (282-ac), S. Kennedy Survey, 340 feet from south and 800 feet from west line of lease; 1, 340 feet from south and west lines of lease. Phillips & Craig, Houston, R. Grigas 1 (100-ac), J. S. O'Connor Survey, 210 feet from south and west lines of lease.

In Fisher County the following permits were granted: Roeser & Pendleton, Inc., Ft. Worth, T. E. Hill 1 (80-ac), Section 193, Blk. 1, BBB&C Survey, 651 feet from north and 330 feet from west line of section. The Texas Company, Cisco, Fee 1 (17-ac), Section 6, Block R. W, E. Richardson Survey, 150 feet from north and 850 feet from west line; G. A. Daniels 2 (320-ac), Section 194, BBB&C Survey, 660 feet from north and 330 feet from west line of section; T. A. Jean 4 (46-ac)' Section 201, BBB&C Survey, 660 feet from north and 330 feet from east line of section; 3, 2310 feet from east and 330 feet from south line of section. J. D. Young Company, Inc., Midland, M. T. Oates 1, (1320-ac), Section 228 Coulson Survey, 330 feet west and 5180 feet from north line.

In Gregg County the following permits were granted: Jones-O'Brien, Inc., Shreveport, La., Hughey-Ross 15, (118-ac), J. Hilliard Survey, 330 feet from north and east lines. H. L. Hunt, Tyler, S. Hale B7, (71-ac), J. Darley Survey (Rusk County), Nicholson-Terrell Oil Corporation, Longview, W. R. Nicholson 2, (19-ac), M. Mann Survey, 330 feet from south of center of north line.

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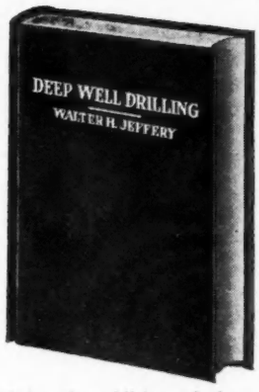

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In Gray County the following permits were granted: Skelly Oil Company, Tulsa, Okla., L. H. Webb 1, (160-ac), Section 61, Block 25, H&GN Survey, 340 feet from north and 1000 feet from east line of SE¼. Bell Oil & Gas Company, Pampa, Webb 1, (40-ac), Section 61, Block 25, H&GN Survey, 330 feet from north and east lines SW¼ NW¼. Lefors Petroleum Company, Lefors, Davis-Shaw 3, (50-ac), T. Leach Survey, 270 feet from east and 240 feet from south line of survey; 1, 1585 feet from north and 1515 feet from west line of survey. L. S. Chism, McLain, J. Carpenter 1, (160-ac), Section 37, Block 25, H&GN Survey, 330 feet from north and west lines. Texas Company, Ft. Worth, J. E. Wright 9, (160-ac), Section 13, Block 3, I&GN Survey, 1320 feet from north and 990 feet from west line of SE¼. Cosmo Oil Company, Wichita Falls, T. Catlin 4, (80-ac), Section 57, Block 3, I&GN Survey, 898 feet from south and 300 feet from west line; 3, 990 feet from south and 300 feet from east line; 2, 238 feet from south and 300 feet from west line. Anderson & Bean, Pampa, Thompson 3, (160-ac), Section 126, Block 3, I&GN Survey, 330 feet from west and 990 feet from south line of NW¼; 4, 990 feet from north and 330 feet from west line of section. Vollmert 3, (160-ac), Section 14, Block 3, I&GN Survey, 330 feet from south and east lines of SW¼.

In Harris County the following permits were granted: Jack Schultz, Ft. Worth, West 1, (40-ac), Geo. Dedrick Survey, 1400 feet from west and 100 feet from south line. Moody Corporation, Houston, K. F. Whitehead A4, Hamilton Survey No. 51, 30 feet from north and 50 feet from east line. Danciger Oil & Refining Company, Ft. Worth. M. Hooks 2, (109-ac), W. Donoho Survey, 330 feet east of center of west line of Block 24. Humble Oil & Refining Company, Houston, H. S. Gebhart 1 (1459-ac), Wm. Perkins Survey, 1399 feet from west and 1489 feet from north line; C. F. W. Hendricks 1, (98-ac), Wm. Hurd Survey, 505 feet from east and 466 feet from north line. Oceanic Petroleum Company, Houston, State 1 (14-ac), T. S. Maffey Survey, 104 feet from south and 139 feet from west line.

In Hardin County the following permits were granted: Rio Bravo Oil Company, Houston, Fee J-101, (128-ac), C. F. S. Jorditt Survey, 200 feet north of No. 100.

In Howard County the following permits were granted: Moody Corporation, Tulsa, Okla, D. Roberts B33, (160-ac), Section 137, Block 29, W&NW Survey, center. D. Roberts E22, (240-ac), Section 136, Block 29, W&NW Survey, center.

In Hutchinson County, the following permits were granted: J. L. Murphy Oil Company, Amarillo, Watkins 3, (320-ac), Section 13, Block M21, T. C. Ry. Survey, 880 feet east of No. 2; 2, 880 feet east of No. 1. O. D. Smith, Amarillo, W. B. Haile A1, (82-ac), Section 4, Block M21, T. C. Ry. Survey, 330 feet from south and west lines; 2, 330 feet from south and east lines; 3, 330 feet from north and east lines; 4, 330 feet from north and west lines. W. B. Haile B1, (164-ac), Section 4, Block M-21, T. C. Ry. Survey, 330 feet from south and west lines; 2, 330 feet from north and west lines.

In Jack County the following permits were granted: Texas Plains Oil Company, Wichita Falls, W. H. Terrell E1, (580-ac), M. Rockerfellow Survey, 150 feet from north and east lines. J. A. McLaughlin, Wichita Falls, S. C. Cantrell 1, (40-ac), J. W. Williams Survey, 150 feet from east and 450 feet from south line.

In Jefferson County the following permits were granted: Wilson Broach Company, Beaumont, Ft. Worth 15, (5-ac), Block 30, J. A. Veatch Survey, southwest corner. Higgins 59, (14-ac), J. A. Veatch Survey, west central part of lease.

In Jim Hogg County the following permit was granted: Brooklyn Oil Company, Laredo, W. W. Allen 1, (40-ac), Block 87, Randado Survey, 660 feet from north and east lines.

In Jim Wells County the following permit was granted: M. J. Brannon, San Antonio, S. McCarley 1, (100-ac), Section 5, Block A, 650 feet west of center of east line.

In Jones County the following permit was granted: Gibson & Johnson, Inc., Ft. Worth, L. R. Cade 1, (79-ac), Section 12, Block 19, T&P Survey, 150 feet from south and east lines.

In Liberty County the following permits, Anchor Oil Company, Dallas, C. Davis 1, (1400-ac), J. F. Rumayor Survey, 600 feet from north and east lines; 2, 600 feet from south and east lines; 3, 600 feet west of No. 2; 4, 600 feet from north and 7000 feet from east line. J. K. Seale, Hull, W. T. Finley 1, (100-ac), A. B. Hardin Survey, 1075 feet from east and 575 feet from south line. Miramar Corporation, Houston, Phoenix 2, (25-ac), J. Devore Survey, 230 feet from south and 250 feet from west line. Texas Company, Houston, Barrow 5, (17-ac), J. Devore Survey, 400 feet from north and 250 feet from west line. D. Hannah 9, (50-ac), J. Devore Survey, 100 feet east of No. 8.

In Limestone County the following permit was granted: F. A. Schweinridge, Houston, Fee 1, (115-ac), A. Vincent Survey, 600 feet from west and 1000 feet from south line.

In Montgomery County the following permits were granted: M. R. Pretty, Houston, Moffat-Goodson 1, (100-ac), W. S. Taylor Survey, 466 feet north of

center of south line. H. M. Crighton, Conroe, South Texas Development B2, T&NO Survey No. 5, 837 feet from west and 234 feet from south line. South Texas Development 1, (37-ac), T&NO Survey No. 5, 837 feet from west and 234 feet from south line. C. B. Hamill, Houston, J. Llewellyn 1, (160-ac), R. G. Hamlett Survey, 200 feet from west and 466 feet from north line. Alpha Petroleum Corporation, Houston, A. R. Allen 1, (80-ac), L. Smith Survey, 275 feet from east and 467 feet from north line. Midland Oil Company, San Antonio, V. Walters 5, (108-ac), W. Strickland Survey 466 feet from east and 300 feet from south line. Strake Petroleum Company, Inc., Houston, O. M. Dean 2, (978-ac), W. C. C. Lynch Survey, 467 feet from south and east lines. G. Hamman 2, (232-ac), C. B. Stewart Survey, 467 feet from south and east lines. C. M. Dean 1, (978-ac), W. C. C. Lynche Survey, 330 feet from north and east lines. P. G. Krohn 1, (906-ac), S. H. Bryan Survey, 350 feet from north and 467 feet from east line. Alpha Petroleum Corporation, Houston, E. E. Hensley 1, (25-ac), A. Steel Survey, 466 feet from north and east lines. Feltex Oil Corporation, Houston, Kirby 4, (96-ac), G. W. Wagers Survey, 340 feet from west and 1399 feet from south line.

In McMullen County the following permit was granted: French Oil Corporation, Laredo, Two Rivers 1, (640-ac), Section 66, 330 feet from north and 1650 feet from west line.

In Medina County the following permit was granted: O. R. Frame, et al, San Antonio, E. Boelke 1, (102-ac), Section 10, S. Huth Survey, 987 feet from north and 600 feet from east line.

In Nueces County the following permit was granted: H. E. Steele, San Antonio, T. C. Ingram 1, (80-ac), Section 7, Block 6, S. R. Peters Survey, 330 feet from north and west lines.

In Orange County the following permits were granted: Texas Company, Houston, Orange National Bank B5, (150-ac), J. Beaumont Survey, 200 feet from north and 150 feet from east line; 2, 600 feet from west and 200 feet from north line; 3, 450 feet east of No. 2; 4, 450 feet east of No. 3. J. W. Polk B1, (1016-ac), J. Beaumont Survey, 150 feet from north and east lines; 2, 534 feet west of No. 1; 3, 300 feet west of No. 2. H. J. Kuhn 4, (1199-ac), J. T. Notgrass Survey, 300 feet east of No. 5; 5, 534 feet east of No. 6; 6, 150 feet from south and west lines; 7, 1434 feet from west and 200 feet from south line; 8, 450 feet east of No. 7; 9, 450 feet east of No. 8; 10, 433 feet east of No. 9. H. J. Krohn 11, M. E. Hall Survey No. 2, 150 feet from south and east lines of survey.

In Polk County the following permits were granted: Polk County Oil Company, Ft. Worth, W. C. Craig 2, (98-ac), M. C. Swinney Survey, 660 feet west of No. 1. Wirt Davis et al, Dallas, Davis-Holmes 1 (364-ac), A. Viesca Survey, 600 feet from south and west lines; 2, 600 feet south of No. 1; 3, 600 feet south of No. 2; 4, 600 feet south of No. 3.

In Palo Pinto County the following permits were granted: O. P. Coffin, Caddo, B. Goen 1, (160-ac), Section 19, Block A, T&P Survey, 1115 feet from north and 1315 feet from east line of section. Palo Pinto Oil & Gas Company, Strawn, Strawn Coal 9, (800-ac), A. Ashworth Survey, 1050 feet from east and 7000 feet from south line.

In Pecos County the following permits were granted: Oneal & Sproles, Ft. Worth, F. Turner, Jr., 2A, (142-ac), Section 1, 300 feet from west and 196 feet from north line; 4A, 250 feet from west and 1000 feet from south line; 7A, 250 feet from west and 280 feet from south line; 8A, 250 feet from east and 560 feet from south line. F. Turner, Jr., 1B, (66-ac), Section 2, 250 feet from north and 308 feet from east line; 2B, 250 feet from north and 305 feet from west line; 3B, 250 feet from west and 356 feet from south line; 4B, 250 feet from east and 717 feet from south line. F. Turner, Jr., 2C, (64-ac), Section 3, 205 feet from north and east lines. F. Turner, Jr. 1D, (69-ac), Section 4, 150 feet from north and 250 feet from west line.

In Rusk County the following permits were granted: Hunt Production Company, Tyler, S. Hale B7, (71-ac), J. Darley Survey, 265 feet from north and 660 feet from east line. O. Young 11, (126-ac), M. J. Pru Survey, 282 feet north of No. 1. Abercrombie & Harrison Oil Company, Houston, W. P. Brightwell 2B, (15-ac), R. E. Winn Survey, 450 feet from south and 261 feet from west line. Shoreline Oil Company, Marshall, I. Brightwell 2, (5½-ac), R. W. Smith Survey, 150 feet from north and 141 feet from west line. Mabee Consolidated Oil Corporation, Arp, S. Stone 4, (17-ac), M. J. Pru Survey, 650 feet south of No. 2. B. R. Bradley, Rec., Groesbeck, E. B. Alford 2 (3-ac), I. G. Parker Survey, 150 feet west of center of east line. Gillum, Florey & Warren, Overton, I. Brightwell 3, (7½-ac), R. W. Smith Survey, 500 feet west of No. 1. James Tuohy, Ft. Worth, A. Thrash 1, (2½-ac), M. J. Pru Survey, center. East Texas Oil Refining Company, Dallas, C. Barksdale 4, (15-ac), M. J. Pru Survey, 300 feet from east and 202 feet from south line. Humble Oil & Refining Company, Houston, M. Kangerga A27, (333-ac), M. J. Pru Survey, 305 feet north of No. 26. C. Pilgreen 10, (136-ac), T. H. Smith Survey, 330 feet from east and 1760 feet from south line. Mid-Kansas Oil & Gas Company, Shreveport, La., Clay 8, (130-ac), M. V. Pena Survey, 152 feet from north and 200 feet from east line. East Texas Oil Refining Company, Dallas, W. A. Givens 5, (20-ac), R. W. Smith Survey, 452 feet from west and 171 feet from south line. Shell Petroleum Corporation, Dallas, W. P. Moore 13, (140-ac), H. Wiggins Survey, 360 feet east of No. 6. Gulf Production Company, Houston, W. A. Maxwell 6, (57-ac), F. Cordova Survey, 328 feet from east and 1093 feet from south line. H. Sexton A4, (54-ac), M. McCabe Survey, 330 feet from south and west lines. W. G. Sexton 9, (165-ac), M. McCabe Survey, 635 feet north of No. 1.

In Refugio County the following permits were granted: Nesral Production Company, Houston, T. O'Connor 1, (100-ac), N. S. Crunk Survey, 200 feet from northwest and 433 feet from northeast line. Heyser & Heard, Dallas, J. M. O'Brien 2, (50-ac), E. H. Winfield Survey, 466 feet from north and west lines of Lot 6. J. M. O'Brien 1A, (50-ac), E. H. Winfield Survey, 466 feet from south and east lines of Lot 5. Dash Production Company, San Antonio, J. M. O'Brien 1, (50-ac), N. S. Crunk Survey, 150 feet from north and east lines. E. M. Jones, San Antonio, J. M. O'Brien 1A, (227-ac), N. S. Crunk Survey, 620 feet southeast of No. 1; 1, 550 feet from west and 615 feet from northwest line. Texas Company, Houston, J. F. Welder 2, (400-ac), J. T. McGrew Survey, 467 feet from north and west lines; 1, 467 feet from south and west lines. Blanco Oil Company, Refugio, J. M. O'Brien B2, (50-ac), E. H. Winfield Survey, 466 feet from south and east lines. Greta Oil Company, Refugio, J. F. B. Heard 1, (150-ac), M. S. Ximinez Survey, 466 feet from west and 522 feet from south line. Union Exploration Company, Houston, F. B. Rooke 2, (100-ac), 935 feet from north and 1690 feet from east line.

In Smith County the following permits were granted: E. H. Moore, Tulsa, Okla., Bennett-Smith 3, (12-ac), Jas. Jordan Survey, 90 feet from north and 277 feet from east line. W. A. Flint, Henderson, N. Breen 1 (4-ac), M. Hussner Survey, center. Sun Oil Company, Dallas, M. Thomas 8, (72-ac), P. McAnelly Survey, 660 feet southwest of No. 4 (Gregg County). J. A. Layne 8, (103-ac), S. Dexter Survey, 669 feet east of No. 4. Sinclair-Prairie Oil Company, Ft. Worth, M. T. Cole 33, (666-ac), S. Brooks Survey No. 110, 1000

feet from north and 2046 feet from east line; 34, 985 feet from east and 1223 feet from north line; 35, 1658 feet from north and 1988 feet from east line. A. S. Jarvis A20, (266-ac), J. Vargas Survey, 1600 feet from north and 1365 feet from west line. Mayfield A24, (374-ac), Jas. Jordan Survey, 770 feet northeast of No. 12; 23, 700 feet northeast of No. 15. R. G. Wright 9 (107-ac), J. Vargas Survey, 751 feet north of No. 6. D. Wright 14, (162-ac), J. Vargas Survey, 330 feet from south and 1286 feet from west line. A. S. Jarvis C18, (256-ac), M. S. Coy Survey, 1378 feet from west and 1600 feet from north line. A. S. Jarvis A21 (266-ac), J. Vargas Survey, 990 feet from north and 1650 feet from west line; 22, 983 feet from east and 330 feet from south line; 20, 990 feet from west and 860 feet from south line.

In Shackleford County the following permits were granted: Roeser & Pendleton, Inc., Ft. Worth, Morris-Buie A5, (560-ac), Section 201, E. T. Ry. Survey, 220 feet from south and west lines. J. L. McMurray, Cisco, J. B. Mathews 1 (47-ac), Section 57, E. T. Ry. Survey, 200 feet from north and 500 feet from east line. Union Oil & Mining Company, Abilene, W. A. Carter 2 (100-ac), Section 70, L. A. L. Survey, 336 feet southeast of No. 1. L. H. Hill 3 (120-ac), Section 38, Blind Asy. Survey, 925 feet from north and 1120 feet from east line. L. C. Huskey 55, (520-ac), Section 548, TE&L Survey, 750 feet from west and 1650 feet from south line. A. B. Bissey, Albany, H. H. Horton 3 (60-ac), Section 818, TE&L Survey, 300 feet northeast of No. 1.

In Starr County the following permits were granted: W. A. Smith, Houston, A. Munos 1 (40-ac), El Javali Survey, southeast corner. Parkin & Hoffman, Rio Grande City, E. A. Peffley 1, (1280-ac), Section 933, Block 23, 150 feet from north and 450 feet from west line of Block 23. W. R. Shankle, Laredo, M. M. Garcia 1 (200-ac), Por. 90, Block 33, 150 feet from south and west lines; 2, 150 feet from south and east lines.

In Stephens County the following permit was granted: N. G. Carter, Ft. Worth, J. Cook 1A (80-ac), Section 26, Block 6, T&P Survey, northwest corner.

In Taylor County the following permits were granted: E. G. Shawl, Abilene, E. Smith A1 (110-ac), J. Jarman Survey, No. 82, southeast corner.

In Titus County the following permit was granted: F. W. Maddox, Pittsburg, First State Bank 1 (47-ac), J. F. Box Survey, 300 feet from north and 525 feet from west line.

In Travis County the following permit was granted: Weaver & Osburn, Austin, W. Reinhardt 1 (100-ac), Wm. Lewis Survey, 1200 feet from north and 300 feet from west line.

In Trinity County the following permit was granted: T. M. Smith, Trinity, O. Moody 1 (50-ac), E. Robertson Survey, 150 feet from east and 450 feet from south line.

In Upshur County the following permits were granted: J. A. Woods, Dallas, W. F. Smith 1 (31-ac), J. M. Pineda Survey, 330 feet north of center of south line. Feazel-Davenport Corporation, Dallas, W. M. Phillips 7 (70-ac), H. H. Edwards Survey, 660 feet west of No. 2. Margay Oil Corporation, Tulsa, Okla., O. M. Victory 6 (86-ac), E. A. J. Evans Survey, 600 feet north of No. 2. Salome-Cooper Drilling Company, Longview, E. O'Byrne 8 (301-ac), J. M. Pineda Survey, 720 feet from west and 370 feet from south line; 9, 840 feet from east and 750 feet from south line. East Texas Oil Refining Company, Dallas, F. White 10 (96-ac), H. H. Edwards Survey, 2085 feet east of No. 9; 11, 1825 feet from east and 330 feet from south line. Magnolia Petroleum Company, Dallas, C. Brooks 1 (50-ac), J. F. Davidson Survey, 330 feet from south and east lines; 2, 330 feet from south and west lines.

In Victoria County the following permit was granted: Texas Company, Houston, A. M. McFaddin 6B, A. J. Gray Survey, 50 feet north of No. 6.

In Ward County the following permits were granted: Wahlenmaier Petroleum Corporation, Ft. Worth, R. M. Blodget 1 (80-ac), Section 26, Block 5, H&TC Survey, 150 feet from north and east lines. E. E. Sturm et al, Grandfalls, P. M. Yell 1 (100-ac), Section 6, W. F. Stewart Survey, 330 feet from north and west lines.

In Washington County the following permit was granted: G. W. Strake, Houston, H. Wehmeyer 1 (599-ac), M. Byrd Survey, 3000 feet from west and 500 feet from north line.

In Wheeler County the following permits were granted: Piney Oil & Gas Company, Shamrock, J. P. Koons 1 (80-ac), Section 43, Block 24, H&TC Survey, 330 feet from south and east lines E½ NE¼. Magic Oil & Gas Company, Pampa, Koons 1 (80-ac), Section 43, Block 25, H&GN Survey, 330 feet from north and east lines.

In Wichita County the following permits were granted: M. A. Hamilton, Wichita Falls, A. McKinley 2 (280-ac), R. Curry Survey, 1050 feet from south and east lines. G. W. Cooper, Wichita Falls, T. J. Waggoner 2 (40-ac), Block 3, H. George Survey, 50 feet east of No. 1; 3, 330 feet east of No. 2.

In Wilbarger County the following permits were granted: Waggoner Refining Company, Electra, W. T. Waggoner U2, (10-ac), Section 22, Block 4, H&TC Survey, 150 feet from north and 170 feet from west line; 1, 150 feet from north and 170 feet from east line. Luther Webb, Vernon, W. T. Waggoner 1 (160-ac), Section 22, Block 4, H&TC Survey, 560 feet from east and 890 feet from south line. Fain-McGaha Oil Corporation, Wichita Falls, W. T. Waggoner B6 (320-ac), Section 51, Block 4, H&TC Survey, 98 feet northwest of No. 3. W. T. Waggoner L21 (200-ac), Section 31, Block 4, H&TC Survey, 605 feet from north and 600 feet from west line.

In Young County the following permits were granted: H-Y Oil Company, Fort Worth, N. P. Larimore 8, (40-ac), TE&L Survey No. 2247, 300 feet east of No. 7. H. I. Stine, Ft. Worth, Rayborn 1 (40-ac), TE&L Survey No. 1366, 1100 feet from north and 150 feet from east line. American Refining Properties, Wichita Falls, Bashara A5 (1920-ac), TE&L Survey No. 2932, 150 feet from east and 750 feet from south line of section. Texas Company, Cisco, J. K. Jeffery D1 (40-ac), TE&L Survey No. 50, 150 feet from south and east lines N½ SW¼. W. C. Eastland et al, Ft. Worth, Fee 1 (40-ac), TE&L Survey 3412, 200 feet from west and 691 feet from south line.. Iron Mountain Oil Company, Ft. Worth, Y. Swain 5 (92-ac), TE&L Survey No. 1465, 1000 feet from east and 150 feet from south line. Chas. E. Knox, Enid, Okla., A. R. Manning 3 (80-ac), TE&L Survey No. 3412, 400 feet east of No. 1. Somers & Snoddy, Wichita Falls, Gose 1 (150-ac), Section 313, 1716 feet from west and 750 feet from north line.

In Zapata County the following permits were granted: A. H. Wray, Laredo, Gopeer 1 (20-ac), Section 1 Block 14, 500 feet from northwest and 520 feet from southwest line; 2, 300 feet from northwest and 1020 feet from southwest line.

Nueces County Wildcat Testing Showing of Oil

San Antonio, Texas.—John F. Camp is making a drill stem test of a sand at 5672-78 feet showing oil and gas in R. King 1, Nueces County. The well is about a half-mile east of two gassers drilled on the same ranch by Camp and Stanolind Oil & Gas Company, but their production is coming from a much shallower depth.

The well is 1980 feet from the north line and 660 feet from the west line of the northeast quarter of Section 29.

Edwards Lime Production Seems Assured in Bexar

San Antonio, Texas.—Bexar County was placed in the spotlight of South Texas during the week with an Edwards lime field appearing to be an almost certainty. The well, C. W. Boler et al's S. W. Kearney 1, I. Perez survey, topped the Edwards lime at 1469 feet, took a core at 1470-72 feet, which showed plenty of saturation, and has run 5-3/16-inch casing to 1460 feet. It has an elevation of 580 feet.

Should this well make a producer, it will be the first production to be established in the Edwards lime outside of the Luling-Darst Creek area in Guadalupe and Caldwell Counties. And, it will be the first successful test out of scores drilled to the Edwards lime along this trend. Heretofore, there has been a great controversy as to the possibility of the Edwards producing anywhere outside of the immediate Luling district.

The well is located 150 feet from the north and east lines of a 20-acre tract in the I. Perez survey, on the Watson road, near the Palo Alto road and 15 miles south of San Antonio. It is owned by Boler, Peery and Woodie of Wichita Falls. The well was started by O. N. Beer for these interests.

The well recently caused a great deal of excitement following its showing in the Austin chalk and Eagleford from 1100 to 1257 feet. A string of 6⅝-inch casing was set at 1100 feet, and the well flowed for a short time after an acid treatment, which caused it to be deepened.

The owners of the well control about 500 acres around the well. Other acreage is held by The Texas Company, 300 acres; Lefevre & Spice, 300 acres; Linda Oil Company, 200 acres; and several with smaller tracts. Some trading is being done with rather large prices being paid for close in stuff.

A throw of approximately 450 to 500 feet is indicated in the fault against which this well is being drilled. While it topped the Edwards at 1469 feet, a well almost offsetting it to the north was abandoned below 1500 feet and still in the Taylor marl.

A couple miles northeast of this well, I. L. Dingman had set casing over a serpentine and chalk showing at 1108-1201 feet in C. Cassin 1, Rodriguez survey. It is between the Kearney well and Mitchells lake and also offers to open a new field for the county.

A. M. Blume has drilled his L. Ridder 1, Section 58, County Block 5196, to 495 feet and shut down. I. L. Dingman has set casing in C. Cassin at 1100 feet over a showing in Serpentine and chalk at 1108-1201 feet. It is in the Rodiguez survey. Gatlin Oil Company has spudded I. A. Beck 16, J. Montez survey. J. F. Harrison is drilling below 425 feet in F. Gembler 1, J. Montez survey. R. J. Kieffer et al's E. & T. Ruiz 1, F. Rolen survey No. 48, is drilling at 350 feet. LaSalle Oil Company is down 150 feet in City 1, D. Bustillos survey. C. J. LeCompte's R. Diaz 3, Diaz farm lots 1 and 2, has resumed drilling at 1410 feet. Motes-Campbell Company's S. Stumberg 2, F. Rolen survey No. 48, is drilling at 160 feet. George L. O'Neill et al's G. F. Niemann 1, J. Montez survey No. 6, is spudding. H. A. Pagenkopf drilled Goeth 1, J. Montez survey to 960 feet and shut down. Phillips Oil & Gas Company has a location for T. R. Dillon 1, M. De Luna Grant. Roe and Day are down 115 feet in City National Bank 2, I. Perez survey. C. A. Smith is drilling H. J. Lamm 1, Jose de la Garza Grant, at 410 feet. F. E. Tegler's G. W. Brackenridge 1, G. Alenes survey, is drilling at 1110 feet. F. J. Van Delden's Frank Webber 1, J. Montez survey, has been spudded.

Greta Field Soon Subject To Production Proration

San Antonio, Texas.—Proration of the Greta field, recently opened in Refugio County, is likely in the immediate future with production already nearing the 10,000-barrel mark. The fifth producer was completed in the field during the past week. Two more were in the process of completion, while several more were on the sand. The average output of the present producing wells is about 1000 barrels to the well on choke.

The newest well is Alamo Petroleum Company's J. M. O'Brien 2, located in the northeast corner of tract 7, Smith subdivision of the E. H. Winfield survey, most northerly well in the field. Blanco Oil Company's J. M. O'Brien 1-B, northeast corner 59-acre tract in Winfield survey, after topping the sand at 4355 feet, drilled in to 4401 feet, and is awaiting the deputy supervisor of the railroad commission to complete the well. Southwest Oil Corporation, likewise, is in process of completing J. M. O'Brien 1-B, which is drilling in after topping the sand at 4375. It is at the town of Greta and one mile south of present production.

The interesting happening of the week was the completion of a transfer of a large interest in the producing area. George E. Smith, of Greta Oil Company, and discoverer of the field, is reported to have sold his entire holdings in the field and in the immediate area to William F. Morgan et al. The deal involved 1000 acres of leases in the field, half interest in the discovery well, one cratered well, a drilling well and leases of Greta Oil Company. Smith held half interest in the Greta organization with O. R. Seagraves. The consideration was not announced.

The Texas Company originally had plans for the construction of a pipe line into the field, but has abandoned this idea. A deal has been made with Atlantic Pipe Line Company, which already has a pipe line to the producing area, whereby the latter will take the oil to its Harbor Island terminal near Port Aransas and load onto The Texas Company tankers.

The interesting deep tests in the field are two outpost locations and the only two wells to fail to show production in the 4400-foot sand. Atkins & O'Neill's J. F. Welder 1, McGrew survey, is drilling at 6190 feet, and Vidauri Oil Company's J. F. Welder 1, same survey, is drilling at 5671 feet.

Allen & Morris are drilling in their G. W. Sutherland 1, Section 188. The well has a sand at 2357-65 feet, showing for production. Brooklyn Oil Company's J. P. Akin 1, Section 184, is a location. Buchanan and Port Isabell Oil & Gas Company are moving in for B. T. Ellison 1, Section 44. L. W. Capps is swabbing at 2434 feet through the casing in Duval Ranch 5-A, Section 574. Central Producers, Inc.'s C. W. Hahl 7, Section 42, is spudding. Conway & Campbell's W. K. Hoffman 1, Section 114, is drilling at 950 feet. DeSoto Oil Company's Wood-Welder 2, Section 211, has set and cemented casing at 2140 feet. Humble Oil & Refining Company is drilling C. W. Hahl 9, Section 360, at 950 feet, and has spudded C. W. Hahl 10, Section 74. Navarro Oil Company's C. W. Hahl 27, Section 360, drilled to 2292 feet, plugged to 2280 feet, and is waiting on cement. S. S. H. Oil Company's Hunter 1, Section 515, has spudded. Reynosa Oil Company's C. W. Hahl 8, Section 42, has the sand at 2277-84 feet, and has set casing. Reynosa Oil Company has located

Duval Ranch 2-B, Section 363, and Duval Ranch 2-A, Section 362. Sarnosa Oil Company's A. Weil 15, Section 130, has the sand at 2397-2424 feet, and is swabbing. Smith & Story are drilling Lundell 4, Section 48, the depth being 1600 feet. Southwest Drilling Company's R. Wendt 12, Section 43, is drilling in after setting casing atop the sand at 2248 feet. Sun Oil Company is swabbing Cano (Cuellar) 5, Section 576, which has the sand at 2410-19 feet.

South Texas Completions Well Scattered Over Area

San Antonio, Texas.—A number of producers in scattered section of South Texas were completed during the past week. They follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
Bastrop County—		
Ogden & Reed, M. V. Talley 1, Maxmillian Sur.	*	2124
Caldwell County—		
Eddie Thomson, E. Rodenberg 1-A, J. Berry sur	*	2438
R. F. Duggan et al, G. W. Sutherland 1, Sec. 187	*	2701
Navarro Oil Co., C. W. Hahl 14, Sec. 360	1080	2281
G. C. Porter, A. J. Smith 2, Sec. 46	75	2319
Texas Co., M. B. Johnson 8, Sec. 42	120	2269
Jim Hogg County—		
Seaton A. Barnes Jr., Holbein 1, Blk. 54, Sec. 1, Las Aminas Grant	*	2520
LaSalle County—		
C. B. Bunte Inc., Mrs. T. A. Coleman 1, Sec. 68	*	3508
McMullen County—		
Darby Pet. Co., W. H. Sling 1, Sec. 111, DS&F sur.	*	2936
Loma Oil Co., L. Jacob 14-A, Sec. 7, GH&H Sur.	60	956
Refugio County—		
Alamo Pet. Co., J. M. O'Brien 2, Tract 7, E. H. Winfield survey	960	4381
Dash Prod. Co., J. M. O'Brien 1, E. H. Winfield sur.	960	4396
Starr County—		
George Stovall et al, J. W. Seabury 1, Sec. 107	*	2500
Webb County—		
Mag. Pet. Co., J. Garcia 1, Sec. 1100, Blk. 9	¶3½	2153
Moca Oil Co., Duval Ranch 5, League 3, Blk. 22, ŻCSL sur.	*	956
Zapata County—		
J. W. Edwards, R. Hinnant 1, Blk. 8, Sur. 116	*	1820
Texas Co., Jennings 24, Cerrito Blanco Grant	50	1198

*Failures; †Junked; ¶Million cu. ft. gas.

South Texas Wildcat Tests Showing for Production

San Antonio, Texas.—About a half dozen wildcats in several South Texas counties were looming up as producers during the week. Two in Bexar County were expected to open new fields, while a deep showing in Nueces County was being tested. The North Kohler district of Duval County, also was holding interest with a new wildcat showing for production of some kind.

R. N. Herod has taken over Harry Traylor's A. L. Dietzel 1, Lease 67, Block 4, John Smith survey, Aransas County, where derrick has been erected.

E. O. Burton is drilling at 624 feet in Smith-Mowinkle 1, No. 172, F. Perez survey, Atascosa County.

In Bastrop County, Ca-Tex Oil & Gas Company's Harris-Buckner 1, John Maximillian survey, had a broken shale and Serpentine series from 2347-57 feet and is coring ahead. Chiquita Oil Company is drilling in M. I. Harris 2, J. Maximillian survey, topped Dale lime at 2151 feet and drilled to 2170 feet. Hinton and Dodson are drilling C. L. Moncure 1, M. Rosseau survey, in shale and boulders at 450 feet. Marts & Bevans are rigging Reyes 3, Addison Lytton survey, and have set 6⅝-inch casing in C. L. Riddle 2-A, at 2080 feet. It is in the John Maximillian survey. J. E. Mills et al's S. A. Voss 1, A. Litton survey, has been spudded. Ogden & Reed have rigged Spradlin 1, J. Gray survey, and are rigging up to pump C. L. Riddle 1, J. Maximillian survey. Trio Oil Company's D. Miears 1, J. Maximillian survey No. 2, is drilling at 2245 feet in chalk.

In Bee County, V. I. Grisham is running tubing at 4393 feet in J. M. Rapp 1-B, Section 12, C. Miller survey. C. Mauldin et al's J. L. Maulding 3, G. A. Kerr survey, has set casing at 3880 feet.

Blanco County Development Company's A. J. Dittmar 1, George Evans Survey No. 58, in Blanco County, is drilling at 665 feet.

Judge R. L. Batts is down 2070 feet in Roebuck 2, Arthur Swift survey, Caldwell County, while Cargill et al's Brown 1, Dillard Cooper survey, is drilling at 2244 feet. Three Oil Corporation has derrick up for M. Ingram 1, H. Morgan survey, and C. J. Webster Oil & Gas Company is moving in for Fulps 1, John Neill survey.

C. B. Bunte et al's Emil 1, Andrew Lockhart survey, DeWitt County, is a location.

Ed Anglin is drilling A. J. Fitch 1, Section 4, F. Proctor survey, Dimmit County, at 1080 feet in sandy shale.

Nixon-Dore and Power's A. Lindig 1, Section No. 4, Gillespie County, is drilling at 920 feet in shale.

Gillette Oil Company's Weldon & Lackey 1, J. Gomez survey, Goliad County, is drilling at 2200 feet.

B. C. Lanier's L. D. Hill 2, George Allen survey in Guadalupe County, is making hole below 500 feet.

F. J. Van Delden's W. M. Burnett 1, J. Ingram survey, Hays County, is preparing to resume drilling.

Maxwell and Young are drilling at 800 feet in King 1, Lot 8, Block 16, Alamo tract, in Hidalgo County. Chancellor, Hall & Slator's Garcia 1, Porcion 42, is drilling at 2115 feet.

Brooklyn Oil Company has made location in Block 87 of the Pippin Subdivision of the Randado Grant, Jim Hogg County, for Allen 1. Cole Petroleum Company and Clark & Cowden's J. Vela-Pena Brothers 1, Section 588, is drilling at 1100 feet. Shankle et al's O. Thompson 1, Block 19, Section 2, is drilling at 2810 feet.

Crude Oil Royalty Company is preparing to set casing in W. D. Wade 1, B. B. Allen survey, Lot 2, total depth 2648 feet. It is in Jim Wells County.

In Karnes County, Accumulator Royalty Company's Rudd 1, John Adriance survey, is drilling at 1800 feet. Begol Oil Company's R. A. McKinney 6, is rigging up. Karnes County Development Company's C. Salge 1, John Pate survey, is drilling at 1635 feet.

H. W. Martin is drilling Houston 1, W. F. Wright survey, Kendall County, at 847 feet.

J. E. Anderson is drilling at 1800 feet in J. D. Witt 1, located in Section 1923, Hamilton survey, Kerr County. W. E. Clark is rigging up Jeff Love 1, Section 1759.

In La Salle County, W. H. Wallace is testing a sand at 1487-94 feet in H. O. Yeager 1, Section 95.

Live Oak County has several operations. Coquat & O'Neill and Phillips Petroleum Company's Sanger 3, Section 350, is shut down after reaching 400 feet. J. H. Durbin will shortly begin on P. H. Marbach 2, S. Hays survey. Marine Corporation has located J. B. Dunning 1, M. B. Kiolin survey.

J. W. Edwards' J. T. Brown 1, J. T. Brown survey, McMullen County, is drilling at 735 feet. Longhorn Oil Company's H. L. Lark 3, Block 14, E. W. B. Scrugham survey, is drilling at 550 feet. Nixon & Foster's J. G. Lowe 1, A. Starr survey, Section 132, is a location. S. R. & C. Oil Corporation et al's Reeves 1, Francis

Smith Survey No. 4, is drilling at 1125 feet. H. A. Suttle set surface casing in H. L. Lark 1, Block 16, E. W. B. Scrugham survey. Light Stephenson et al's C. T. Lark 1, Block 15, E. B. Scrugham survey, has recemented at 1033 feet. C. C. Shumway et al's Shiner 3, Section 80, Shumway survey, is drilling below 2000 feet.

Refugio County still holds the center of attraction. Blanco Oil Company's J. J. O'Brien 1, N. S. Crunck survey, is coring at 4398 feet, former report being in error; J. J. O'Brien 2, same survey, is drilling at 330 feet; J. M. O'Brien 1-B, Winfield survey, is being completed at 4401 feet. Burton & Beasley have a fishing job about 4650 feet, the total depth being 4733 feet. The well is Damaan 1, Section 16, Bonnie View Ranch. Circle W. Oil Company's J. M. O'Brien 1, E. H. Winfield survey, has spudded, and J. M. O'Brien 2, is a derrick. Floboots Oil Corporation's J. M. O'Brien 1, Winfield survey, set 1300 feet of casing. Greta Oil Company's J. M. O'Brien 3, Winfield survey, is drilling at 530 feet. H. F. Heep's J. M. O'Brien 1, N. S. Crunck survey, is a location. Heyser & Heard and Atlantic's J. M. O'Brien 1-B, Winfield survey, Block 5, is rigging up, while J. M. O'Brien 2-B, is location. Humble Oil & Refining Company is rigging O'Conner 8, Edwin M. Jones is drilling at 4075 feet in J. M. O'Brien 1, Block 4, Winfield survey; O'Brien 2, is a location. Karona Oil Company is setting casing in J. M. O'Brien 1, Block 6, Winfield survey, the sand being topped at 4369 feet. Nesral Oil Company's Wilson Heard Jr. 2, Ximinez survey, is drilling at 595 feet, and Ira Heard 1, same survey, is a derrick; T. H. Heard 1, E. H. Winfield survey, also is a derrick. O'Neill and Atkins are drilling J. F. Welder 1, James McGrew survey, at 6190 feet. Pat Rutherford is starting J. M. O'Brien 1 and 2, N. S. Crunck survey. Southwest Oil Company has location for J. M. O'Brien 2-A and 3-A, E. H. Winfield survey, is drilling in J. M. O'Brien 1-B, N. W. Crunck survey, at 4375 feet, and has location for O'Brien 2-B. United Production Company is completing M. F. Lambert 1-A, Hews & Brown survey, just below 6200 feet. Vidauri Oil Company's J. F. Welder 1, J. McGrew survey, is drilling at 5671 feet.

Chancellor & Woods' A. Guerra 1, Block 6, San Jose survey, in Starr County, is drilling at 2110 feet. E. R. Cooper's J. M. Martinez 1, Section 135, is drilling around 3100 feet. Goodwin & Yantis are rigging up on Kelsey Bass 1, Porcion 86-87, Section 3. Great Plains Oil Company's Sanchez 1, Section 344, is resuming drilling at 2230 feet. Jeffries Lambeth Oil Company's Starr County Cattle Company 1, Porcion 89, is running casing to 2467 feet.

In Victoria County, Gulf Production Company's G. Keeran 4, M. De Leon Survey, is drilling at 4666 feet. Stonleigh Oil & Gas Company's Zimmer 1, R. Manchola survey No. 2, is a derrick. The Texas Company's McFadden 6-A, A. J. Gray survey, is drilling at 2932 feet.

In Webb County, Ross E. Fenton has located Puig Brothers 1, Block 66, Edgington subdivision of the Puig ranch. Frank Gravis has located Yeager-Stronan 11, Share 5, Las Animas Grant. Gray Oil Company's A. S. Billings 1, Section 13, Block 1, is drilling below 1750 feet. E. A. Teagel's G. Villareal 2, SW SW Section 720, is waiting on cement after setting casing at 2234 feet. Smith & Storey have located S. Lloyd et al 2, Block 14, Section 23. Washabaugh & Roberts are drilling M. Bruni 1, Section 139, at 1800 feet.

O. W. Killam is drilling A. M. Bruni 2, Block 6, Section 15, Zapata County, at 1800 feet. The Texas Company has spudded Jennings 23, C. Blanco grant, while United Production Company is moving on Jennings 11, same grant.

Continue Efforts for Oil In North Kohler District

San Antonio, Texas.—Continued efforts are being made to develop oil production in the North Kohler district, Duval County, including the Sutherland and Peters ranches. The newest well is Allen and Morris' G. W. Sutherland 1, which showed 23 joints of pipe line oil on a drill stem test from 2357-65 feet in the Government Wells horizon. Casing has been set and the plugs drilled.

The well is about one mile south and a little east of Brooklyn Oil Company's G. W. Sutherland 1, recently completed as a gasser spraying oil from 2447-59 feet, and is about the same distance northeast of Shasta Oil Company's Peters 1-B (4), which is a 15-barrel oil well in the Government Wells sand at 2360 feet, topped at 2350 feet. This test is 165 feet from the north and west lines of SW NE Section 188.

R. F. Duggan et al's G. W. Sutherland 1, Section 187, about a half-mile north of the Brooklyn well, showed a little oil from 2572-83 feet, but failed to make a producer when bailed. It was deepened to 2701 feet and abandoned.

In the Sarnosa and Government Wells fields to the north, a number of new tests are in process of completion. None of them, however, will add anything in the way of new territory to the present proven area.

Several miles still farther northeast of the Government Wells field, however, DeSoto Oil Company got the sand at 2140 feet and set casing in Wood-Welder 2, located 660 feet east of No. 1 in Section 211. The first well was a gasser at this level.

Texas Commission Faces Problem in Establishing New Allowables

(Continued from page 15)

constitute an individual problem. It is maintained that the taking of "potential" flow tests will damage the Coastal wells, which produce from loose sands; and that too rigid pinching of wells or intermittent withdrawals such as those practiced in the East Texas field will sometimes kill the wells so handled.

In view of such contentions by both large and small operators, the commission has been disposed to place rather flexible and lenient allowables for the Coastal fields and wells, and has usually allotted given fields allowables without regard to potentials. Similar circumstances have also attended proration of related fields farther south, such as the Government Wells and Refugio.

The result of the circumstances surrounding proration of the Gulf Coast fields has been, as might be expected, relatively high allowables per well for some of the flush areas. Thus the allowables fixed by the railroad commission permit daily production of 137.5 barrels daily per well at Thompsons field, 154.69 barrels daily per well at Barbers Hill, 174.42 barrels at Sugarland, and 258.62 barrels at High Island; although the quotas are much lower in some other Coastal fields as for example 57.72 barrels daily per well at Raccoon Bend, 65.47 barrels daily at Refugio, and 75 barrels daily in the Government Wells district of Duval County.

East Texas

The Van field, a prolific 4324-acre Woodbine sand area in East Texas, has an average allowable of about 137 barrels per well. It shares honors with the Yates field in having observed proration without an exception since discovery, although exposed to competitive development.

Revised proration schedule applied to the East Texas field effective at midnight August 7 raised the official allowable from 573,272 to 598,500 barrels daily, or an average of 57.9 barrels daily per well. The individual well allowance ranges from 20 barrels daily for marginal wells to a maximum of 100 barrels daily.

Reeves County Test Will Be Shot As Final Effort

San Angelo, Texas. — Oil and gas showings passed up by the northern Reeves County wildcat test of Merry Brothers and Perini and Dunigan Brothers on the H. H. Johnson ranch in the Delaware lime formation between 4329 and 4640 feet will be given a heavy shot of nitro as a final effort to make a commercial producer. This test is in the southwest part of Section

5, H&GN Ry. survey, Block 4, being across the Pecos River and about four miles west by south of a small flowing well in the same horizon held by Byrd-Frost-Harmon and Shipley Oil Corporation on the Lee Monroe tract. Reeves County has been a barren spot on the West Texas oil map, and its best bet is believed to be the Delaware, which has proven profitable in the Wheat pool near the Loving-Reeves County line.

Moran Drilling Company, W. T. Waggoner III and others' semi-wildcat test on the R. W. Smith tract, located about two miles southeast of production in northern Ector County, was drilling below 4080 feet late last week to be the next completion in the county. Smith 1, located in NWc Section 12, Block 43, T-1-S, encountered a small show oil in lime at 4010-15 feet, with a surface elevation of 3063 feet.

A new producer and a new location for the Ordovician lime horizon in the Big Lake field were reported last week. Big Lake Oil Company's University 11-C, located 2300 feet north and 2140 feet west of the southeast corner of Section 12, Block 2, was flowing above 900 barrels of high gravity oil and 2,650,000 cubic feet of gas daily while drilling in with Hydril rotary table at 8742 feet. It began making oil and gas at 8568 feet, and is an outpost producer for the northwest side of the field. Big Lake Oil Company has made location for University 13-C, 1470 feet south and 1110 feet east of the northwest corner of Section 25, Block 9, being a northeast outpost location. Group One Oil Corporation's University 8-B, located on extreme south end of the deep zone, is rigging up to plug back from 8695 feet to 8670 feet because of making more water than oil. It is low on structure but earned an initial flow rating of 8000 barrels and 11,500,000 cubic feet gas when completed May 23.

The second projected Ordovician lime test for Schleicher County has been ordered plugged as a junked hole after attaining a depth of 6108 feet. This failure was drilled on the Joe Tisdale ranch under a unit contract originally operated by Eastland Oil Company, but more recently by Phillips Petroleum Company. A parted string of 4½-inch casing caused the abandonment after drilling at intervals since January 6, 1931. J. D. Wesner, Phillips Petroleum Company et al's Nicks-Ratliff 1, was junked last June at 6630 feet.

West Texas had three completions last week, including two small producers and a wildcat failure, as follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
Howard County—		
L. C. Harrison & The Texas Co., Denman 4	40	3008
Schleicher County—		
Eastland Oil Co.-Phillips Pet. Co. et al, Joe Tisdale 1	*	6108
Winkler County—		
Sid Richardson et al, W. F. Scarborough 2-A	70	3050

*Failures; †Junked; ¶Million cu. ft. gas.

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More Failure Than Success In No. Texas Completions

Wichita Falls, Texas.—Five oil producers having a combined initial pumping gauge of 345 barrels daily were added in North Texas among the 13 completions reported last week. There were eight failures, including a junked hole in Wilbarger County.

Wheeler & Brashear's S. R. Jeffrey 2-B, second well for shallow pool opened in north central Young County a few weeks ago, earned an initial rating of 170 barrels daily from sand at 761 feet.

Completions in North Texas for the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County—		
A. Kriss et al, Mrs. May Rutty 2	*	651
Perkins-Cullum Oil Co., C. L. Abercrombie 2-A	*	1245
Clay County—		
Joe Brady et al, Texas Land & Mtg. Co. 1	*	357
Jack County—		
Broadie-Sampley et al, W. E. Hunt 2	*	605
Wichita County—		
C. W. Clark et al, Allen-Kemp 3-A	30	1055
J. C. Clower et al, Geo. L. Dobie 17	*	365
Geo. W. Cooper et al, Waggoner Bros. 1	30	1289
J. L. Swanner et al, Mrs. B. Parker 3-C	*	783
Wilbarger County—		
Fain-McGaha Oil Corp., Waggoner 21-L	*	2554
Young County—		
H-Y Oil Co., Larrimore 8	40	710
Lowe Farm Oil Co., J. T. Lowe 6	75	645
Petroleum Producers Co., Belknap 1	*	709
Wheeler & Brashear, S. R. Jeffrey 2-B	170	761

*Failures; †Junked; ¶Million cu. ft. gas.

CORRECTION

In the caption on a photograph which appeared in July 25 issue of THE OIL WEEKLY showing Gulf Production Company's J. T. McElroy 103 test which is seeking Ordivician production from the Ellenberger Lime in West Texas it was stated that Reed tool joints were used when it should have read that Reed six-inch tool joints and Hughes four-inch tool joints were used. The test is drilling below 4400 feet at last reports.

Small Oil Well Completed In Central West Texas

Ranger, Texas.—West Central Texas added five completions during the past week, including one oil producer and two small gassers. The single oil producer was completed in western Shackelford County by the Wilson Drilling Company's Morris-Buie 4, which pumped 100 barrels daily from saturated lime at 1614 feet.

Detailed list of completions follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
Callahan County—		
Hayek Oil Co., Finley 1-A	¶¼	520
Snebold et al, E. F. Finley 1	¶½	1020
Coleman County—		
Howard Culp et al, J. C. Dibrell 1	*	450
Shackelford County—		
A. B. Bissey et al, M. C. Taylor 1	*	710
Wilson Drilling Co., Morris-Buie 4	100	1614

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Panhandle Adds Three Oil Producers

Pampa, Texas.—Three oil producers having an aggregate of 550 barrels of initial production were completed in the Texas Panhandle during the past week.

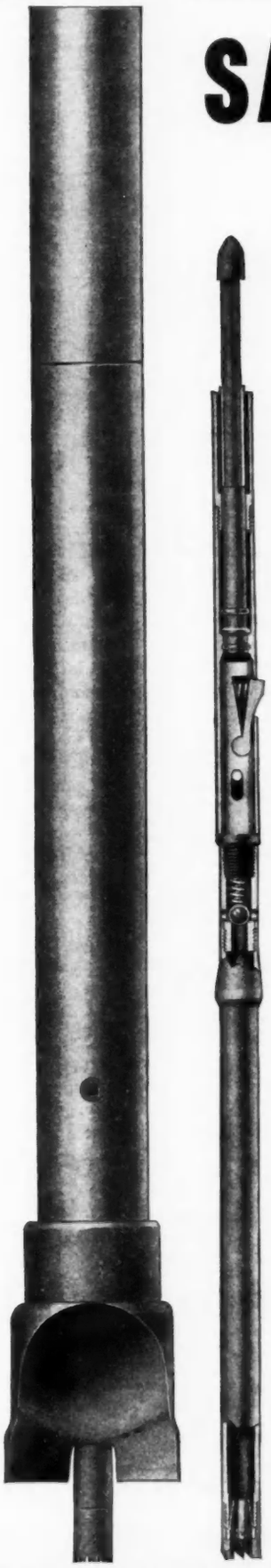
Steady gain in field work is in evidence in the district, with proven oil leases in Hutchinson and Gray Counties sharing in the bulk of the new drilling. Anticipation of an early hike in crude prices serves as an inducement for a revival of drilling, while the demand for crude has improved since the Texas Railroad Commission procured effective enforcement of its proration orders after a series of court battles.

Company, Well and Location	Init. Prod. Bbls.	Depth
Gray County—		
Gulf Prod. Co., T. W. Catlin 3-A	250	3153
Hutchinson County—		
Dixon Creek Oil & Ref. Co., W. B. Haile 1	150	3055
E. W. Means et al, R. L. Pond 1	150	3083

*Failures; †Junked; ¶Million cu. ft. gas.

Shell's Wild Well at Iowa Still Burning

Lake Charles, Louisiana.—While Shell Petroleum Corporation's wild well at Iowa continued to burn last week, drilling operations proceeded on three other sites in the field, one well remained temporarily shut down, and



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construction work was started on a road to the location of a new test.

The burning well is F. Heyd 4, which has a depth of 4929 feet although the gas is coming from a slightly higher level. It has been running wild since early July. It is on the same lease that Shell Petroleum Corporation is building roads for another test, F. Heyd 5, location of the latter being about 500 feet north and 1900 feet east of the burning well. Tuten 1 is shut down at 1337 feet, and Stafford 2 was drilling at 6015.

The other two drilling wells at Iowa are Magnolia Petroleum Company's Wait 4, which was drilling sticky shale at 6235 feet late in the week, and that company's Willett 2, which was in shale at 4130 feet.

New Test Should Define Tomball Field

Houston, Texas.—Evidence is being assembled steadily on the nature and characteristics of the new Tomball field, northern Harris County, as indicated by the developments of the past week involving completion of three new producing wells to give the area a total of seven, progress of another well down to the oil sand, and starting of three new wells, including outpost tests to the southeast and the west of the present limits of the field.

The proven area was extended only slightly through the three completions of the past week, and the test which is nearing completion is likewise on an inside location.

Of the three new wells of the past week Humble Oil & Refining Company's Herbert Reid 1 contributed most toward defining the field, its location being approximately 3500 feet east and slightly south of the nearest producer, the discovery well (Magnolia Petroleum Company's J. F. W. Kobs 1). Reid 1 proved to be the best producer so far completed in the field with exception of the discovery well, having flowed 59 barrels of pipe line oil during the first hour through a one half-inch choke, showing tubing pressure of 2040 pounds. That was at the rate of 1416 barrels daily, which also compares favorably with initial production rates of wells in the Conroe field. Depth of Reid 1 is 5565 feet. The Tomball discovery well flowed 69 barrels per hour through one-half inch choke initially from 5569 feet. Location of Reid 1 is 2232 feet south and 2232 feet west of the northeast corner of the Chauncy Goodrich (lower) Survey, Abstract 305.

Another of the three new wells which contributed materially toward defining the productive area was Humble Oil & Refining Company's Doege 1, located about 6800 feet northwest of the Tomball discovery well and almost on a line between two other previously completed producers, Humble's Mrs. F. Martens 1 and Magnolia Petroleum Company's Will Rudel 1. Doege 1 was completed as a gas well at 5586 feet, being rated as a 2,500,000-cubic foot per day gas producer, registering 1900 pounds tubing pressure through one-fourth inch choke. Doege 1 is in the upper C. Goodrich Survey, Abstract 311, 1399 feet north and 1013 feet west of the southeast corner of the 89-acre tract.

The other new producer is Continental Oil Company's Petrich 1, completed as a dry gas well with shut-in pressure of 1500 pounds at 5588 feet. It is in the central portion of the Joseph House Survey, on a 50-acre strip, being an east offset to Magnolia Petroleum Company's Will Rudel 1. Rudel 1 had also been completed as a dry gas well at 5508-5528 feet, but was deepened to 5590 feet and then plugged back to 5554 feet, at which depth it remained shut down late last week, waiting on orders. The two last named wells, both gas wells, are the most northerly producers of the field and are approximately 2½ miles from the discovery well and adjacent producers at the opposite edge of the present proven area.

The well which was nearing completion last week is Humble Oil & Refining Company's Emil Schultz 1, located in the central portion of the present proven area, in the southeast quarter of the upper C. Goodrich Survey, Abstract 311, being 1107 feet north and 900 feet east of the southwest corner of a 123.71-acre tract. It had cored oil-bearing sand at 5556 feet.

One of the three new wells started at Tomball during the past week was Humble Oil & Refining Company's William Bloecher 1, located about 2000 feet east of Emil Schultz 1 at a site 1050 feet from the south line and 650 feet from the west line of an 82-acre tract in the John N. Hooper (upper) Survey, Abstract 375. Late in the week it was drilling shale at 300 feet.

Humble Oil & Refining Company's Gebhart 1, another of the new tests, represents a long step out from production, being 11,000 feet southeast of the newly completed Herbert Reid 1, nearest producer. Gebhart 1 is located near the northwest corner of the William Perkins Survey, being 1399 feet south of the north line and 1400 feet east of the west line of the H. F. Gebhart tract. It is approximately 14,000 feet southeast of the Tomball discovery well. Late last week Gebhart 1 had 10-inch casing cemented at 1134 feet.

The other of the three new tests at Tomball is Humble Oil & Refining Company's Hendrichs 1, outpost to the west of production. It is about 4000 feet west and a little north of the nearest completed producer, Humble's Mrs. F. Martens 1, and approximately two miles west and a little north of the Tomball discovery well. The location is near the northwest corner of the William Hurd Survey, Abstract 377, being 466 feet from the north line and 500 feet from the east line of a 95.7-acre tract. A derrick was being erected at the site late in the past week.

Conroe Gets Half of Coast Completions, Most of Oil

Houston, Texas.—Although Conroe still continues to furnish a high proportion of new wells being completed along the Texas Gulf Coast, there is important activity in numerous other fields, and during the past week each of the 11 completions at Conroe was matched with one in some other area of the region.

Among the 22 completions six different fields and three wildcat areas were represented; and the total wells completed included 14 oil producers, two gas wells, and six dry holes. The percentage of failures was relatively low for the Gulf Coast, and resulted from the good record of successful completions which has characterized Conroe field throughout its history, the 11 wells finished there for the week including 10 oil producers and one gas well.

In addition to Conroe and Tomball, other fields which furnished comple-

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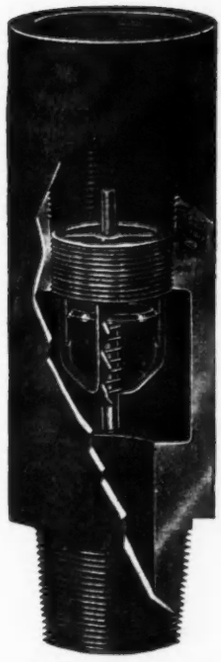
tions included Big Creek, Saratoga, Stratton Ridge, and Thompsons. Wildcat failures were recorded in Colorado, Harris and Montgomery Counties.

Details on Texas Gulf Coast completions for the week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
Big Creek Field—		
Gulf Production Co., Davis 47, pumping	15	3788
Colorado County—		
McCulloch Oil Co., Kansteiner 1, 2 mi ne Columbus, Leander Beason sur.	*	4702
Conroe Field—		
Alpha Petroleum Corp., Krohn B-1	1320	5135
Bishop Oil Co., Smith & Ratliff 2	1900	5125
Houston Oil-Tidewater, R. L. Cartwright 7	1500	5183
Humble Oil & Refining Co., A. G. Rogers 1	¶3½	5114
South Texas Development Co. B-4	1750	5139
South Texas Development Co. A-36	1600	5133
Navarro-Farlyn, Perry Heirs 2	720	5154
Sun Oil Co., Foster 6	1825	5130
W. N Foster 10	1000	5144
Stewart 6-A	1850	5132
Tide Water-G. W. Strake, Krohn 6	1800	5137
Harris County—		
Jack Schultz et al, Woodburn 1, Genoa prospect, August Whitlock survey..	*	5708
Huffman Dome Development Co., E. M. House 1, Hale prospect, Mary McGruder survey, temp, abn.	*	5083
Montgomery County—		
Fostoria Lumber Co., Foster Lumber Co. 1, wtr. sand	*	5580
Saratoga Field—		
Seven Wells Corp., Teel 1, sw flank of dome, temporarily abandoned	*	6270
Stratton Ridge Field—		
Rycade and Amerada, Seaburn 4, 150 ft w No. 3...	*	4307
Thompsons Field—		
Gulf-Humble, A. E. Myers 9	1500	5349
Humble-Gulf, Lockwood & Sharpe B-15	1250	5395
Tomball Field—		
Humble Oil & Refining Co., Herbert Reid 1, C. Goodrich survey, 2232 feet s and 2232 feet w NEc sur..	1500	5565
A. Doege 1, C. Goodrich survey, 6800 ft nw discovery well, 1399 ft n and 1013 ft w of SEc 89-ac tr.	¶2½	5586

*Failures; †Junked; ¶Million cu. ft. gas.



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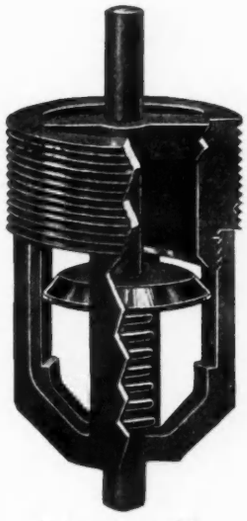

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Washington County Gets New Test

Houston, Texas.—George W. Strake of Houston, who discovered the Conroe field late in 1931 and thereby started an intensive exploration campaign along what is called the "Conroe trend," has again assumed the role of wildcatter in virgin territory, having made location for a test in the extreme portion of Washington County, about 15 miles north of the mentioned shore line trend which he made prominent by the Conroe discovery.

Work is scheduled to begin immediately on the Washington County drilling site, located 3000 feet from the west line and 500 feet from the north line of the Henry Wehmeyer (formerly West) 599-acre tract in the Micajah Byrd League, approximately 1½ miles west of the Brazos River. The location of the test is about 15 miles north of Raccoon Bend field, 18 miles east of Brenham, and seven miles southwest of Navasota.

Strake has a lease block of approximately 24,000 acres around the drilling site, and is basing his activities in the area on surface geology and geophysical investigation.

There has been no drilling in the immediate vicinity of the new location. To the west Mid-Kansas Oil & Gas Company drilled several wells to about 3500 feet, the one nearest the Strake location being about five miles away in the A. Miller Survey. To the east the nearest test was Wainwright West Oils, Limited, et al, Templeman 1, about three miles distant, across the river in the Isaac Jackson Survey, Grimes County, which was abandoned in the Cook Mountain formation at 4563 feet after having had showings of oil and gas around 3000 feet.

Although the Washington County wildcat is Strake's first drilling project outside of Conroe since he discovered that field, he has been trading in leases and royalties in some other areas, including the Tomball district, new producing area in northern Harris County, where he contemplates undertaking some drilling within a short time.

Gulf Coast Wildcatting Active

Houston.—Various interesting developments occurred during the past week among wildcat drilling operations along the Texas Gulf Coast, among them being the following: resumption of activity at the site of Yount-Lee Oil Company's E. W. Boyt 1, southeastern Liberty County, which holds the depth record for Texas and Louisiana with bottom of the hole at 9509 feet; abandonment of an important deep wildcat in southern Montgomery County, several miles northeast of the Tomball-Hufsmith district; failure of a 6000-foot test on the Lolita prospect, Jackson County; starting of work on two new locations by Pure Oil Company on its Louise prospect, Wharton County; and announcement of several new locations.

Details on the progress of Texas Gulf Coast wildcats the latter part of the week are herewith given.

In Austin County, Phillips et al's Grigor 1, eight miles south of Willis, James O'Connor Survey, has spudded and shut down. Turnbull & Erwin's Watson 1, Stephen F. Austin Survey, same county, was coring sandy shale at 2610 feet.

In Brazoria County, E. A. Anderson et al's Reynolds 1, Flag Pond district, Johnson Walker Borden League, during the past week remained shut down at 3000 feet. Rycade Oil Corporation and Amerada Petroleum Corporation's Seaburn 3 at East Stratton Ridge is being reworked. Danciger Oil Refining Company's Hunt 2, Pledger, was standing at 7725 feet.

In the Garwood district, Colorado County, Humble Oil & Refining Company's O. M. Powell 1, 1399 feet west and 466 feet north of the southeast corner of Section 45, I. & G. N. Survey, was in sand at 6147 feet, drill stem test having been unsuccessful mechanically. Weimar Development Company's H. T. Brandt 1, four miles north of Borden and in the F. Pettus Survey, was drilling shale at 5805 feet. Peerless Oil & Gas Company's E. J. Frazier 1, five miles north of Garwood, on a 320-acre tract in Section 11, S. A. & M. G. Survey, was still a location. Plymouth Oil Company's Broussard 1, in westerly northeast corner of H. Duffner Survey, had surface casing set at 300 feet.

In Fort Bend County, Fresno Petroleum Company's Mildred T. Wood 1, Tract 474, Thomas Gleason Survey, was drilling shale at 4675 feet.

In Grimes County, Cambrian Oil Company's W. V. Sangster 1, in most westerly northwest corner of a 218 tract in the John Moore Survey, was a derrick onto which materials were being moved. Petroleum Southwest Corporation's Greer 1, Pat O'Connor Survey, Carlos prospect, was shut down in sandy shale at 3275 feet.

In Hardin County, Danciger Oil Refining Company's Hook 1, 1600 feet southeast of production off the flank of Batson dome, was coring sandy shale at 4890 feet.

Hamill Drilling Company's Clara Walker 1, Sage Survey, Post Oak district, Harris County, was drilling shale and lime at 5040 feet. Hamilton et al's Hargrove 1, W. C. Railroad Survey 10, one mile west of Fairbanks, was shut down at 4600 feet in shale. Gholson and Parson's W. E. Freeman 1, Section 57, Block 2, H. & T. C. Survey, was drilling shale and lime at 5915 feet. G. I. Lewis, Trustee's J. W. Goar 1, Sarah McKissick Survey, was shut down in sand and shale at 4460 feet. H. B. Jordan et al's W. S. Cochran 1, Hockley district, Abstract 293, J. Jordan Survey, was shut down at 1975 feet. John Deering was drilling at 925 feet in Warren 4 at Hockley.

The Texas Company's I. N. Mitchell 1, Jackson County, north of Lolita in the Clements subdivision of the Stephen F. Austin League, was abandoned at 6041 feet in shale. Continental Oil Company's F. Vincek 1, Block 71, Bennett subdivision, V. Garcia Survey, was ready to spud.

In Jefferson County, W. J. Parker's Winnie T. Rorick 1, A. Williams Survey, four miles north of Beaumont, was still shut down at 2410 feet. Sun Oil Company's Paggi 1, T. & N. O. Survey 32, was drilling shale at 4700 feet.

In southeastern Liberty County, Yount-Lee Oil Company's E. W. Boyt 1, Plummer prospect, H. & T. C. Survey 17, was washing to bottom after having been shut down for some time on account of high water at 9509 feet, greatest depth ever reached in Texas or on the Texas-Louisiana Gulf Coast. C. S. Thomas et al's Eicke 1, two miles east of Kenefick, was drilling gumbo at 2500 feet. Gulf Production Company's Crowe & Jacobs 2, eastern outpost test at Hankamer field, was drilling gumbo at 1410 feet.

In the Citrus Grove district of Matagorda County, Continental Oil Company's Boker 1, Lot 17, Robbins subdivision, J. Criswell Survey, was drilling sandy shale at 5300 feet.

In Montgomery County, Showers & Moncrief's Chase National Bank 1, 1475-acre tract, Daniel Garret Survey, Abstract 224, was abandoned in shale at 5521 feet after testing salt water.

Pure Will Drill Two More Tests in Wharton County

Houston, Texas.—Pure Oil Company was moving in materials and building derrick foundations late last week for two new tests on the Louise prospect southern Wharton County. No commercial production has yet been established in the area, which is located about three miles southeast of the town of Louise, but highly favorable showings have been found in the two tests which the company is currently drilling there.

Pure Oil Company's operations represent the first actual development in the area, although the drilling was preceded by geophysical work of the company indicating the existence of a deep-seated salt dome or structure.

In the drilling which has been done

important oil and gas showings have been found at depths ranging from 5100 to 7300 feet, and from one of the wells, Stewart 1, a considerable amount of 38 gravity oil was recovered by drill stem test from sand at about 5975 feet.

The two new tests of Pure Oil Company are Isaac Weaver 1 and W. H. Lancaster 1, both being to the southwest of the two earlier tests. Weaver 1 is located about one mile south of Stewart 1, the well from which oil was recovered, and about 1¼ miles southeast of Charles T. Kuntze 1, the other drilling well. The Weaver test is in the J. M. Brownson Survey, Abstract 797, Section 22, being 1650 feet southeast and 1650 feet southwest from the north corner of the section.

Leasing Reflects Interest In Polk County Area

Houston, Texas.—Considerable lease and royalty trading was in progress during the past week in the Livingston area, southern Polk County, particularly to the southeast of the producing wells of Shell Petroleum Corporation and Dick Schwab in the William Shadburn and adjacent surveys; and drilling proceeded on several tests.

Dick Schwab's Hilborger (Craig) 2, north offset to the Shell Petroleum Corporation oil producer, Munson 1, was drilling shale at 1400 feet the latter part of the week. Meanwhile S. F. Gist Oil Corporation's Kavanaugh & Collins 1, farther north, had progressed to 500 feet, where 10-inch casing was cemented.

Louisiana Drill Permits Continue at High Figure

Shreveport, La. — The number of drilling permits issued by the state during the past week was relatively high, as in several consecutive weeks previously, the 40 of the new week bringing the year's total up to 483. Up to the same time in 1932 the total had reached only 295; and in fact the total for all of 1932 was only 451, or considerably less than the number issued through the first seven months of this year.

Details on the locations of new wells for which permits were granted during the past week follow:

In Ascension Parish the following permit was granted: Union Sulphur Company, Sulphur, White & Friant 1, 1175 feet north and 1640 feet west of SEc Section 16-10s-4e.

In Calcasieu Parish the following permits were granted: Fred Oil Company, Inc., DeQuincy, E. Faist et al 1, 566 feet north and 300 feet west of SEc NW SE Section 26-8s-10w. Uunion Sulphur Company, Sulphur, Fee 781, 733 feet north and 1797 feet west of center of Section 29-9s-10w.

In De Soto Parish the following permits were granted: Mrs. Mae Bolliger, Little Rock, Ark., W. Jenkins 1, 330 feet south and west of NEc NE NE Section 3-12n-12w. Hirshfield-Bailey, Shreveport, J. B. Nickey 1, 660 feet north and east of SWc of SE Section 7-13n-12w.

In East Carroll Parish the following permit was granted: T. J. Calver, Rayville, State Lands 1, 1860 feet south and 2639 feet east of NWc of Section 12-19n-10e.

In Grant Parish the following permit was granted: H. H. Temple, Colfax, C. E. Edenborn 1, 330 feet south and east of center of Section 36-7n-3w.

In Iberia Parish the following permit was granted: Jefferson Lake Oil Company, New Iberia, Lake Peigneur 66, 120 feet north of Well No. 59 and 180 feet south of Well No. 62.

In Iberville Parish the following permit was granted: Standard Oil Company, Shreveport, Wilbert Myrtle Grove 5, 1700 feet north and 200 feet west of SEc of SW¼ Section 52-9s-11e.

In Ouachita Parish the following permit was granted: Century Carbon Company, Monroe, McGee 3, 4667 feet east and 220 feet south of NWc of Section 10-18n-4e.

In Sabine Parish the following permits were granted: Evans Bros., Saline, Balew 1, 330 feet south and west of NEc NW¼ of SW¼ of Section 21-9n-13w. Evans Bros., Crawford 2, 330 feet south and west of NEc SW¼ of SE¼ of Section 20-9n-13w; 3, 330 feet south and east of NWc SW¼ of SE¼ of Section 20-9n-13w; 4, 330 north and west of SEc of Section 20-9n-13w. Frank B. Hankins et al, New York, City, N. Y., McCormick 1, 330 feet north and east of SWc N½ of SW¼ of Section 20-8n-11w. Frank B. Hankin et al, New York, N. Y., Pecan Bell Land Co. 1, 330 feet south and west of NEc SE¼ of NE¼ of Section 10-7n-13w; 2, 330 feet north and west of SEc NE¼ of SE¼ of Section 16-7n-13w; 3, 330 feet north and east of SWc NW¼ SE¼ of Section 9-7n-13w; 4, 330 south and west of NEc NW¼ of NW¼ of Section 7-7n-12w. Magnolia Petroleum Company, Shreveport, H. S. Gindralt 1, 265 feet north and 320 feet west of SEc SW¼ of NW¼ of Section 30-8n-11w. Mauldin Drilling Co., Many, Alford 1, 330 feet south and west of NEc NW¼ NW¼ of Section 18-7n-10w; 2, 330 feet south and east of NWc NW¼ of NW¼ of Section 18-7n-10w;3, 330 feet north and west

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of SEc NW¼ of NW¼ of Section 18-7n-10w; 4, 330 feet north and east of SWc NW¼ of NW¼ of Section 18-7n-10w. C. L. Nixon, Many, Patrick 2, 300 feet south and west of NEc SE¼ of SW¼ of Section 21-9n-13w. L. J. Tillery, Beaumont, Sabine Lbr. Company 1, 800 feet south and 225 feet west of NEc LaNana Grant Subd. Line NW¼ of NW¼ of Section 5-7n-11w.

In St. Bernard Parish the following permits were granted: W. A. Walsingham, New Orleans, Coastal Corp. 11, 4100 feet south and 22½° east of NWc of Section 137-14s-14w; Daniel Estopinal 9, 1850 feet north and 9° west of SEc of Section 137-14s-14w; Delacroix 2, 3100 feet north and 38° west of SEc of Section 127-14s-14w; 6, 2495 feet south and 24° west of NEc of Section 137-14s-14w; 7, 940 feet south and 44° west of NEc of Section 129-14s-14w; Dennis C. Pererena 8, 1600 feet north and 50° east of SWc of Section 134-14s-14w; Evans 3, 2280 feet north and 83° west of NEc of Section 135-14s-14e; Lake Bergne Levee Bd. 12, 2100 feet south and 40° east of NWc of Section 136-14s-14w; Levee Bd. 13, 4200 feet south of NWc of Section 136-14s-14e; Mignel Battle, Sr., 4, 1985 feet south and 86° east of SWc of Section 131-14s-14e; 5, 1320 feet north and 45° west of SEc of Section 135-14s-14e; Table Ld. Co. 10, 1655 feet north and 36° east of SWc of Section 126-14s-14e.

In St. Landry Parish the following permits were granted: Capitol Oil Company, Opelousas, Theophile Helmsen 1, 4200 feet north and 150 feet east of SWc of Section 20-6s-5e. The Texas Company, Shreveport, Botany Bay Lbr. Co. Fee 17, Beg at more southerly NE Cor. of Lse. in Sec. 4, run south 8° west 1800 feet, thence north 82° west 600 feet to location.

South Louisiana Wildcats Include Two Deep Ones

Lake Charles, La.—Although wildcat activity along the Louisiana Gulf Coast continues at a relatively low level, there are some interesting operations in progress, including various deep tests and some wells being put down on heretofore undeveloped prospects.

Among those new prospects which are being tested, for example, are two in St. Bernard Parish now being drilled on by Southern Sulphur Company, one in Assumption Parish (Labadieville prospect) where Barnsdall Oil Company is drilling below 5800 feet, and one in La-Fourche Parish (La Rose prospect) also where Barnsdall Oil Company is drilling. The latter company has only recently become interested in Louisiana Gulf Coast development.

Following are details on wildcats currently being drilled in the Louisiana coastal region.

In Acadia Parish, Massart et al's Marsh 1, 1½ miles north by west of Crowley, in Section 44-9s-1e, was shut down the past week at 1840 feet in waiting for drill stem.

Barnsdall Oil Company's William Cypress Company 1, wildcat 10 miles northwest of Thibodeaux on the Labadieville prospect, Assumption Parish, Section 38-14s-14e, was drilling sticky shale at 5826 feet.

Union Sulphur Company's J. C. Stout Lumber Company 1, Section 36-8s-8w, Calcasieu Parish, was drilling at 6652 feet in rock. Quintana Oil Company's Nelson 1, Section 23-10s-9w, same parish, was drilling at 6820 feet in shale.

On Roanoke prospect, Jefferson Davis Parish, Humble Oil & Refining Company's DeVilbiss 2 was drilling out cement at 7843 feet. Meanwhile B. D. Fenley's Clarphy Legion 1, Section 22-10s-4w, was shut down at 5008 feet.

Barnsdall Oil Corporation's Harang Plantation 1, La Fourche Parish, La Rose prospect, Section 6-17s-20e, was moving in materials for derrick.

In Rapides Parish, J. L. Beck's Mixon and Simmons 1, Section 40-4-1e, was drilling shale at 1650 feet. J. L. Nelson's Baum 1 was rigging up. John Hincey's Murphy 1 was rigged up. G. W. Hindman et al's Long Bell Lumber Company 1, Section 30-3n-2w, was shut down at 200 feet.

In St. Bernard Parish, Southern Sulphur Company's State Lery 1, Olevier prospect, Section 28-14s-14e, was drilling surface sand at 212 feet. The same company's State Lake Borgne 1, Shell Beach area, in 13s-15e, east of the Mississippi, was drilling sand at 590 feet.

E. B. Hopkins et al's Standard of Kansas 1, Section 83-10s-6e, St. Martins Parish, was drilling shale at 5003 feet. H. H. Hutchins et al's Whitman Lumber Company 1, Section 15-5s-6e, had spudded.

In Vernon Parish, Robert K. Williams, Trustee, was drilling at 2815 feet in Llano del Rio 1, southeast corner of the northeast quarter of Section 6-1n-9w. Vernon Oil Company's (E. Dawson) Delta Land & Timber Company 1 was drilling gumbo at 2035 feet.

Seven Completions in as Many S. Louisiana Areas

Lake Charles, Louisiana.—The salt dome region of Louisiana furnished seven completions during the past week, a relatively large number. Among them were only three producers, however, the others being dry holes.

Each of the seven completions was on a different dome, and all were on domes found during recent years by geophysical prospecting. The three oil wells were at Lake Barre, Leesville and Gueydan, respectively, and the dry holes were at East Bay Junop, Dog Lake, Four Isle, and Iowa domes.

The three producers ranged from 3500 to 4500 feet in depth, but the dry holes ranged from 5500 to 7500 feet deep.

Company, Well and Location	Init. Prod. Bbls.	Depth
East Bay Junop—		
Sun Oil Co., Taylor Bayou 1, Section 22-21s-14e	*	6048
Dog Lake—		
The Texas Co., Dog Lake State 8, Section 31-31s-16e	*	5517
Four Isle—		
The Texas Co., State Four Island 1, 13-21s-16e	*	6042
Gueydan—		
Pure Oil Co., Alliance Trust Co. 4, 34-11s-1w	575	3565
Iowa—		
Magnolia Petroleum Co., Bowman 1, 12-9s-7w	*	7590
Lake Barre—		
The Texas Co., Lake Barre-LLE 7	1150	3812
Leesville—		
The Texas Co., LLE-Leesville 3	900	4478

*Failures; †Junked; ¶Million cu. ft. gas.

Four North Louisiana Completions Are Failures

Shreveport, La.—There were four completions in North Louisiana during the last week, all being failures. Two were in Zwolle, one in Naborton and the other in the Blanchard gas field of Caddo Parish.

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo Parish (Blanchard)—		
Nick Barbare et al, P. A. Sharpe 2, 9-18-16	*	2734
DeSoto Parish (Naborton)—		
E. J. Stanberry, Naborton O&G Co. 1, 32-13-11	*	1408
Sabine Parish (Zwolle)—		
J. W. Betis et al, Shull 1, 26-8-12	*	2420
Mid-Continent Crude Oil Pur. Co., La. Long Leaf 1, 12-7-11	*	2875

*Failures; †Junked; ¶Million cu. ft. gas.

Claiborne Parish Unit Test Reports Gas Show

Shreveport, La.—United Gas Public Service Company's Addie Durritt 1, Section 31-20n-5w, a wildcat in Claiborne Parish, on a unitized wildcat block, owned along with Triangle Drilling Company, and others, tested five million cubic feet of gas at 4327 feet in the Glen Rose last week but are arranging to deepen. Nine-inch casing was recently cemented at 4220 feet. It is a 5000-foot test.

In the same parish, United Gas Public Service Company is arranging to abandon Meadows 1, NE SE Section 13-21n-5w, at 6691 feet. This is on a 12,000 acre block and was originally intended only as a 5000-foot test.

Status of other North Louisiana wildcats changing last week follows:

In Bienville Parish, Lacola Oil Company's Beck 1, Section 3-18-8w, is shut down at 335 feet.

In Bossier Parish, John L. Anderson's Leonard 1, Section 19-19-13, shut down at 2700 feet. Jensen, Nixon and Gutzler are rigging up for Ledbetter 1, SE SE Section 6-18-11w. On the southwest flank of the Bellevue structure H. I. Morgan's Smith 2, SE SE Section 22-19-11, is drilling below 5305 feet.

In Caddo Parish, John F. Kerper et al's Barron 1, NE SE Section 27-16n-14w, a 5000-foot wildcat test on a 5000-acre block, tested dry at 1937 feet and is reaming in sandy shale at 2100 feet. McAneny & Bird are rigged for Sentell 1 (formerly Lawhon & Bogan 1) in SE SW Section 13-16n-14w. A. D. King, Trustee, spudded Roach 1, Section 4-14-16, for a 4000-foot test on a 2000-acre block, several miles southeast of the Bethany gas field. John B. Hutchinson's Phillips-Storey 1, Section 28-16-14, is drilling below 350 feet.

In Catahoula Parish, George Greer et al have cemented hole and are waiting orders at Louisiana Central Lumber Company B-1, Section 2-9n-6e, after it made gas and salt water after casing was shot recently. Total depth is 3016 feet and Wilcox was logged at 2952 feet.

In DeSoto Parish, Hirschfield, Bailey et al's Nickie 1, SE SE Section 7-13-12, is rigging up. E. T. Oakes is still rebuilding collapsed derrick at Jimmy Hill Johnson 1, SE NE NW Section 30-13-15, at 4616 feet. George L. Pace's John Cale B-1, Section 11-11-11, is rigging. E. M. Self has cemented bottom of hole and is preparing to sidetrack junk in Wagner 1, Section 5-12-14, at 2880 feet. A. F. Tarver's Means 1, Section 23-14-13, is drilling below 2480 feet.

In East Carroll Parish, Marr & Collins have derrick up for Desha Lumber Company 1.

In Grant Parish, State Drilling Company, Inc., of Houston, is arranging to resume drilling at 500 feet in Cameron 1, SW SW NW Section 26-7n-3w.

In Jackson Parish, A. C. Thomas' J. W. Johns 1, NE NE Section 25-15n-3w, is drilling below 1520 feet.

In Morehouse Parish, H. G. Samson of Fort Worth, drilling Barnes & Sullivan 1, NE SW Section 12-21-7e, on a 2700-acre tract, after testing dry at 2545 feet, logged top of the red beds at 2611 feet, and later was coring below 2670 feet; elevation is 104 feet. The red bed contact was 151 feet above the same contact in The Texas Company's Meyers 1, Section 15-22-7e, and 105 feet higher than the same contact in Woodley & Collins' Harp 1, Section 22-22-7e, the latter having shown considerable oil at that horizon.

In Red River Parish, H. M. Jones' Sample 1, NW NW Section 10-14n-11w, is drilling below 820 feet.

Long Stored Smackover Crude Being Moved

El Dorado, Ark.—Standard Oil Company of Louisiana has bought from American Petroleum Company a total of 353,000 barrels of Smackover crude. This oil which was from some of the early Smackover wells and has been stored since 1922-23, is not expected to yield more than 325,000 barrels of commercial oil. Delivery will be at the rate of 5000 barrels daily.

Lion Oil Refining Company recently bought 100,000 barrels from the same stock.

Arkansas-Louisiana Pipe Line Company, starting August 3, is taking 1800 barrels of Smackover crude daily for Louisiana Oil Refining Corporation to use as blending stock at its Bossier City refinery, from Phillips Petroleum Company. It is rumored that a 15-cent premium is being paid.

Two Arkansas Wildcats Making Tests of Oil Shows

Texarkana, Ark. — Arrangements were being made last week for drill stem tests in two southwest Arkansas wildcat wells, after reports were made of logging of sands showing oil.

In Columbia County, C. W. and Rex Alworth of Ranger, Texas, report a sand core showing oil and are arranging a drill stem test at 1860-65 feet in King 1, Section 16-17-20.

In LaFayette County, George W. Harper et al report a sand showing oil was cored at 2024-40 feet in Reed-Bodcaw 1, NW SW NW Section 16-15-22, on a 13,000 acre block and were to make drill stem test at that level.

Status of other Arkansas wildcat tests changing last week follows:

In LaFayette County, Loring Oil Company's Hanson 1, SW NW Section 25-19-22, is drilling below 2710 feet.

In Miller County, Duluth-Arkansas Oil Company's Beck 2, SE SW Section 34-15-26, is drilling below 325 feet. Gleason-Wendell Company's R. M. Patterson 1, SE NE Section 5-19-28, a 4000-foot test, is drilling below 2725 feet. Frank Roe's Dominick 1, NW NW Section 21-15-28, designed for a 4500-foot test, is rigging up.

Standard Building Line To Miller County Wells

Texarkana, Ark.—A four-inch gathering line is being laid from the Miller County, Arkansas, oil field to the Mandeville pumping station of the Standard Pipe Line Company's trunk line, a distance of 11.6 miles. When completed this will be first pipe outlet of the Miller County field which has five small producers.

At a receiver's sale C. E. Murdock, El Dorado, recently bought the holdings in the field including part of the production of Baker-McMurray for a consideration of $8,100 cash. Murdock, it is understood, plans more drilling in the area.

Arkansas' Lone Completion Is Wildcat Failure

Texarkana, Ark.—Only one completion was recorded last week in Arkansas, this being a wildcat failure in LaFayette County. The well had shown gas at total depth of 2804 feet but tested salt water when formation tester was run. The well located in SW SW SW of the section was:

Company, Well and Location	Init. Prod. Bbls.	Depth
LaFayette County (Bodcau)—		
Sam E. Wilson, Jr., Red River Lbr. Co. 1, 19-19s-24w	*	2804

*Failures; †Junked; ¶Million cu. ft. gas.

One Completion, One New Start in Mississippi

Jackson, Mississippi.—One completion, a gasser in the northeast part of the Rankin County part of the Jackson field, was added last week and one new location was announced, the latter a wildcat in Rankin County.

The new test is Ferguson, Fuller & Metz' Ammons 1, 350 feet south and east NWC Section 35-3n-3e, where a derrick is already up and a rig is being installed. The block of several thousand acres was taken for an annual rental of 25 cents and is for five years.

The gasser completed was James A. Alexander, Trustee's, Love Petroleum 1, NE NW NE Section 1-5n-1e, gauging 37,011,000 cubic feet of gas; total

depth is 2377 feet, black shale was logged at 2265 feet and Midway chalk at 2371 feet; elevation is 265 feet.

Following is the status of active wildcats changing in Mississippi during the last week:

In Covington County, Eastman, Gardiner et al's Bank of Seminary 1, NW NW Section 26-8n-15w, is reaming below 5310 feet after logging Midway black shale at 5205 feet; elevation is 426 feet. This is a 7000-foot test.

In Jones County, Snow-Black Petroleum Company's Watkins 1, Section 24-7n-13w, is drilling below 2815 feet.

In Madison County, H. A. Wilson, Trustee, is ready to spud Cepex 1, SW NE Section 24-9n-3e.

In Pearl River County, Gulf Refining Company's Southern Land & Timber Company 1, SE SE Section 10-1s-16w, is drilling below 600 feet.

In Lamar County, Alabama, P. J. McAlpine et al's Gardner 1, NW NW Section 22-15s-16w, is drilling lime below 3920 feet.

Company, Well and Location	Init. Prod. Bbls.	Depth
Rankin County (Jackson)—		
Jas. A. Alexander, Tr., Love Pet. Co. 1, 1-5n-1e	¶37	2377

*Failures; †Junked; ¶Million cu. ft. gas.

Test Will Try All Sands In Torchlight Field

Basin, Wyo.—Schendel interests of Wisconsin have let a contract to W. B. Slagle Drilling Company for a test to all possible oil bearing sands in the Torchlight field east of here. Location is in NW Section 24-51n-93w, which checks 400 feet higher structurally than the test recently drilled by Slagel Drilling Company which had considerable showings of oil in the Greybull sand.

Most New Work in New Mexico in Proven Fields

Santa Fe, New Mexico.—Most of the work now under way in New Mexico is in the proved fields. San Juan County and the San Juan Basin continues to be the most active in wildcat operations, several new tests starting for the deeper horizons.

Norris Realty Company lost the hole in its deep test Pajarito 1, NE Section 22-9n-2e, through mechanical difficulties at 5206 feet and has skidded rig 220 feet southeast and started a new hole and is now drilling below 300 feet. Location is in Bernalillo County.

In Dona Ana County, Viking Oil & Development Company has landed 8¼-inch casing at 900 feet in No. 1-A, SW NW NW Section 26-23s-23e.

In Eddy County, Ralph Spearow et al are drilling at 3304 feet in McClelland 1, SW NW NE Section 22-22s-23e. Pecos Valley Drilling Company is spudding McIntyre 1, NW NW Section 27-23s-25e. Van P. Welsh Jr., is drilling at 200 feet in State 1, NW NE SE Section 22-17s-28e. Stovall & Marshall have a location for Mack 1, C SE SE Section 29-24-27.

In San Juan County, Sanford R. Bashaw and associates of California have spudded for a 4500-foot test in SW Section 1-29-16w, and Aztec Producers have also started a deep test in State 1, SE Section 16-29-11w.

Beyond progress in depth, all other wildcat operations in the state have nothing of interest to report in the last week's drilling.

North Baxter Basin Gas Well Makes 17 Million

Rock Springs, Wyo.—Mountain Fuel Supply Company completed Cappers 2 in the North Baxter Basin field for 17,000,000 cubic feet of gas in the Dakota formation at 3162 feet. Gas from the well, Section 12-9-104, will be turned into the Unita Pipe Line Company's line to Salt Lake City.

The company has a near completion in Florence Wilson 2, NW Section 22-12n-101w, on Hiawatha Dome in northwestern Colorado, which is drilling at 4964 feet. On West Hiawatha or Bartram Dome the same company's Wheeler 1, NW Section 30-12n-100w, is drilling below 720 feet.

The Texas Company is moving in equipment for a new test on the Hiawatha Dome structure, A. P. Van Schaick 1, SW Section 16-12n-100w, and is skidding derrick from Berlin 1 in the same field to a new location.

Craig Field Test Should Be Early Completion

Craig, Colo.—Encountering continued showings of oil and gas, Rocky Mountain Gas Company's Eberle 1, SE Section 9-6-21, in the Craig field three miles west of here, is drilling at 2625 feet, and should be an early completion. The company last week cased off a 10 barrel flow of oil encountered at 1290 feet. The test is being drilled to augment gas supply for Craig.

Iles Dome Test Making Fast Time With Rotary

Steamboat Springs, Colo.—Colorado Oil Corporation, financed largely by California capital, is spudding a test in the Tow Creek field in northwestern Colorado, on the Rapson ranch, SW SW Section 32-7n-86, an offset to The Texas Company's Irwin 1. Contract for drilling was let to A. L. Mosher who moved in equipment from Walden, Colorado.

New Wildcat Tests Get Underway in Colorado

Denver, Colo.—Increased activity is seen in wildcat development in Colorado in the last week. Several new tests were started in the week and a number of old tests that have been idle for months resumed drilling.

Western Colorado Oil Corporation is starting Papson 1, SW SW Section 32-7n-86w, in Moffat County. Crawford Oil & Gas Producing Company has made two locations in Delta County. Pipher 1 is in center NW SW Section 36-15s-92w, and Young 2 is in center NW SW Section 32-15s-91w. The Texas Company is moving in material for test on Bartram Dome, A. P. Van Schaick 1, SW SW Section 19-12n-100w, Moffat County.

W. A. Myers and associates have resumed drilling in State 1, NW SW Section 16-4n-101w, which has been standing for a number of months at 3250 feet. Location is in western Moffat County. Mountain Fuel Supply Company has resumed drilling in Hatch 1, SE NW SW Section 9-11n-101w, Sugarloaf Butte, six miles west of Hiawatha Dome. First contract was completed at 3500 feet. It has been decided to drill to 4500 feet if necessary. Heavier rotary equipment has been installed. Hills Dome Lease Development Company is reported getting ready to run a string of 6⅝-inch casing at 4190 feet in Hills 1, SE Section 27-3s-64w, in Adams County. Test has been standing for some time.

There are 16 other wildcat operations under way in the state, more than half being shut down for one cause or another.

Craig, Colo.—Since spudding in early last week The Texas Company's Iles Investment Company 1, SE NW Section 23-4n-92w, in the Iles pool, 22 miles southwest of here is drilling with rotary equipment at 1200 feet. Olson Drilling Company of Tulsa is drilling the test under contract.

Worland, Wyo.—D. L. MacDonald's Wheeler-Bales 1, SE Section 30-48-90w, in the Hidden Dome oil field, 12 miles east of here, is drilling at 720 feet. Keye & King Syndicate of Billings, Montana, are reported spudding Bales 1, SW NW Section 31-43-90w. Bales Oil Trust last week completed its No. 2, Section 31-48-90w, in the same field for 12 barrels daily at 1500 feet with hole bottomed 35 feet in the Frontier sand. Production is being developed on the Bales acreage for use in the Bales Oil Trust's refinery at Worland.

Six Mountain Completions Include Four Oil Wells

Casper, Wyo.—Six wells were completed in the Rocky Mountain states this week. Three were producing oil wells, one for gas, and one dry hole. Completions are as follows:

Montana

Company, Well and Location	Init. Prod. Bbls.	Depth
Glacier County—		
Dakota-Montana Oil Co., Mattson 1, se se nw 14-34-6w....	30	2815
Toole County—		
Western-Natural Gas Co., Hicks 2, 26-37-4w	25	1738
Wyoming		
Sweetwater County—		
Mountain Fuel Supply Co. (Affiliation Ohio Oil Co.), Capper 2, 12-9-104	¶17	3162
Colorado		
Larimer County—		
Deinninger et al, Kistler 1, c 2-4n-70w	*	339
New Mexico		
San Juan County—		
Continental Oil Co. & Santa Fe Corporation, Rattlesnake 31, 2-29n-19w	100	727
Lea County—		
Texas Co., Lynch 3-A, nw ne 34-20-34	70	374

*Failures; †Junked; ¶Million cu. ft. gas.

Allen Lake Well Deepened From Dakota to Morrison

Laramie, Wyo.—Ohio Oil Company is utilizing gas from A. J. Hazlett 1, NW Section 34-23-79, in the Allan Lake gas field 40 miles northwest of here, for deepening Kanawha 1, Section 34-23-79, from the Dakota to the Morrison. Kanawha 1, discovery well, is drilling and coring at 1686 feet. A. J. Hazlett 1, developed a million cubic feet of gas in the Morrison, which will be used in drilling several deep tests on the structure, and will later furnish the town of Medicine Bow with gas. Ohio Oil Company is developing the Allan Lake structure for a gas supply to Laramie.

Better Price Encouraging Osage Field Activity

Osage, Wyo.—With Osage crude now commanding 77 cents per barrel by rail shipment to refineries and $1.00 per barrel trucked out of the field to small independent plants, operators in the Osage field, Weston County, this week showed renewed activity. For the past three months operators have been shutting down on drilling activity, and storing oil. One company has stored more than 36,000 barrels in the past two months.

This week Yellowstone Oil Company resumed drilling at 100 feet in Butcher 4, SE NW NW Section 23-46-64, which has been shut down since last fall. Chadron Osage Oil Company has two tests rigged and ready to spud, No. 22, NE SW Section 14-46-64, and No. 23, NW NE SW Section 14-46-64; and is moving in materials for a new test, No. 20, SW SW Section 14-46-64. Federal Oil Company has completed rig for No. 5, SE SE SE Section 16-46-64.

Three other tests are drilling in the Osage field, and two are shutdown.

Three New Wildcats Starting in Wyoming

Casper, Wyo.—Three new wildcat tests were reported for Wyoming in the week. Baker Exploration Company of Montana has made application for a test in NE NW Section 20-49-66, in the old Cara or Wakefield district in Crook County.

Another application has been made for a test in Section 36-47-64 in Crook County by Dr. G. W. Earle and associates of Moorcroft, Wyoming. Location is on the K. C. Manlove property, immediately north of the Osage oil field.

Ed Shogren et al are moving equipment for a test on the west uplift of the Old Woman anticline in Niobrarra County. Test is spotted Section 10-36n-65w, and is six miles west of the Lance Creek oil field. Shogren was the operator who brought in the Greasewood Flats discovery well in northeastern Colorado in October, 1930.

Routine operations were reported in the 15 other wildcats drilling in the state.

Thermopolis, Wyo.—Empire State Oil Company is making good progress in Republic 4, Section 14-44-98w, in the Hamilton Dome oil field, Hot Springs County. Test is drilling ahead at 1460 feet. First showing of oil should be encountered in the Curtis sand at 2100 feet. It will be drilled to 2800 feet in the Embar sand, principal producing horizon in the Hamilton Dome oil field.

Test in Border Field Shows for Production

Great Falls, Montana.—Encountering a 30 barrel show of oil, Western Natural Gas Company's Hicks 2, Section 26-37-4w, in the Whitlash field, border area, looks like another producing well for Montana's northernmost field. Test drilled into 38 feet of sand and is running tubing to bottom at 1738 feet for production test. Log of the well tests 25 feet higher structurally than the discovery well one mile to the south. A half-mile northeast of Hicks 2, W. A. Patterson is drilling below 400 feet in Schaefer 1. Test is being drilled for an additional gas supply for the Great Falls line.

Productive Cut Bank Area Practically Doubled

Great Falls, Mont.—Proven area in the Cut Bank oil field was nearly doubled this past week when Wm. Fulton and Commonwealth Oil Company's wildcat drilled into production at 3022 feet and encountered 15 feet of saturated sand. The well, Haggerty 1, NW Section 14-34-6w, 2½ miles west of the proven area, is estimated at 40 barrels on the pump, and will throw open 2000 acres for active drilling. Well is cleaning and swabbing and will be given production test this next week.

A second near completion among Montana wildcats is the Guy Smith test on the Flatwillow structure near Winnet, Petroleum County, NE Section 3-13-26e, which is running casing to bottom at 1232 feet. Hole is believed to be bottomed above the second Cat Creek sand objective of the test.

Embar Oil Company and Enterprise Oil Company's Lynde 2, SW SW SE Section 26-6s-35e, Lodge Grass structure, Big Horn County, is standing at 3450 feet while operators are seeking to clear title on the lease. Hole is believed to be bottomed on top of the sand, and well is a near completion.

Jerry Hawley wildcat, six miles west of the Pondera oil field, in Section 35-27-5w, on the West Pondera structure, is reported resuming operations this week. It was shut down last fall with hole bottomed at 600 feet.

Midway Dome Test Will Go Below 5000 Feet

Casper, Wyo.—Fifth deep test in the Midway Dome oil field, 12 miles north of here, is scheduled to start early this week. Mutual Oil Syndicate, headed by Sidney H. Keoughan, former president of Continental Oil Company has its projected deep test over Boyer 1 core hole, NE SW NE Section 23-35-79w, rigged and ready to spud. Core hole is bottomed at 2500 feet in the Shannon sand and hole will be carried below 5000 feet.

Cut Bank "Discovery" Well Completing After 2 Years

Cut Bank, Mont.—The well which first revealed possibilities of commercial oil production in the Cut Bank field is due for completion this next week after two years of delays and mechanical difficulties. Par Oil Company has at last succeeded in swedging bottom pipe and drilling up casing shoe in Haines 1, SE SE Section 2-34-6w, and is recementing five-inch casing, and is ready to drill further into the Darling this week. The well, formerly called the B&H test was lost, because of collapsed casing, just as it was drilling into the sand with oil rising in

the hole more than two years ago. It was this test which started the active drilling for oil in the Cut Bank district.

One completion was reported in the field this week. R. C. Tarrant's Haglund Jr., 2, NW SE Section 15-34-6w, was completed at 2785-2821 feet for small production. It is cleaning and swabbing preparatory to going on the pump. Alberta-Pacific Consolidated, Ltd., has a near completion in Mattson 2, SE NE SW Section 14-34-6w, which is shut down for water test preparatory to running five-inch casing to bottom at 2884 feet and recementing.

R. C. Tarrant's Hope 1, SW SW Section 18-34-6w, and Santa Rita Oil Company's Simms-Olson 1, NE NE NE Section 26-34-6w, are standing idle waiting for production test. Both wells were shot last week, and will make about 15 barrels each on the pump. There are 17 other operations underway in the proven Cut Bank area.

Badger Basin Rotary Test Contracted to 8500 Feet

Elk Basin, Wyo.—Resolute Oil Company is drilling at 497 feet in its No. 2, NW Section 17-57-10w, second deep test for the Badger Basin field in northern Park County, northern Wyoming. Test will be the deepest rotary operation in the Mountain States with contract calling for a depth below 8500 feet. The discovery well on the structure set a world's record in 1931 for deep drilling with cable tools when it was completed at 8725 feet for 40 barrels daily production flowing since through a Shaffer bean. Resolute Oil Company is backed by Julis Peters of Great Falls, Montana, and the Book-Cadilac interests of Detroit, Michigan.

Lusk, Wyo.—Rocky Mountain Drilling Company is rigged and ready to start deepening operations in J. M. Huber Company's Argo 2, E NW Section 27-36-75, in the Lance Creek field, 20 miles northwest of here. The well, recently taken over by J. M. Huber Company on some leases controlled by Argo Oil Company of Casper, is to be deepened from the Dakota to the Lakota formation for an increase in gas flow for use in the Huber carbon black plant in the field.

Success of Acid Increases Oceana County Activity

Mt. Pleasant, Mich.—Increasing of production on Flannigan & Voorhies' Mitchell 1, Hart township, Oceana County, Section 36, from 75 to 850 barrels a day by acid treatment two weeks ago has started increased development in that district.

Eureka Oil & Gas Company's Chesnavitch 1, Hart township, Section 36, is drilling below 790 feet; Johnson Oil Company's Van Arman 1, Elbridge township, Section 31, is drilling below 400 feet; and James E. Flannigan's Mitchell 2, Hart township, Section 36, is driving pipe. Rig is being built for Mitchell 3, same section.

Flannigan's Powers 1, Shelby township, Section 1, is spudding, and a location has been made by James Cochran on Smith 1, same township, Section 21.

The Mitchell 1 producer is approximately 1 mile west of the discovery well, Du Vall's Werick 1, Section 36, Elbridge township, which was completed a year ago with an initial of 70 barrels.

Testing now is swinging westward in an effort to further define the structure. Production on both of the commercial wells is from the Traverse lime formation, running about 1900 feet.

Deepening Brings Increases in Michigan

Mt. Pleasant, Mich. — Deepening in Dundee lime brought major increases on two Midland County wells this week.

McClanahan Oil Company's Hathaway 1, Section 17, Porter township, was deepened from 3413 feet to 3425 feet with an increase from 1710 barrels to 4300 barrels a day, the latter production against 100 pounds rock pressure.

W. Hunter Atha's Talker 1, Section 7, Lee township, completed a week ago with 100 barrels initial from 3540 feet was deepened to 3542 feet with an increase of 903 barrels the first 24-hour gauge.

Hathaway 1 is located on the west edge of production in the new Porter field while Talker 1 is an outpost well a mile east of production in the old east field.

18,000 Barrel Well Sets New Record for Michigan

Mt. Pleasant, Mich.—Mammoth Petroleum Corporation's Verette 1, Isabella County, Vernon township, NW SE SE Section 23, a half-mile east of production, was brought in August 6 with an estimated open flow of 18,000 barrels a day to set a new Michigan individual well production record.

Production is coming from Dundee lime at 3720 feet.

Only one open flow gauge has been taken and on a 16-minute open test the well flowed 210 barrels of oil of about 44 gravity. The well blew itself in after being drilled to 3720 feet and operators were unable to lift tools from the well. Cable was cut leaving tools in hole in order to shut the control head.

Last reported, Verette 1 had produced steadily for 48 hours from 70 to 90 barrels of oil an hour against 500 pounds back pressure. It was cutting less than three per cent water.

An effort is being made by operators to maintain as high a back pressure as possible to prevent encroachment of water, the Vernon producing horizon being particularly close to the water level.

Verette 1 established a new Michigan production record, the previous maximum output for a well being credited to Pure Oil Company's State-Porter 1, Midland County, Porter township, Section 15, completed April 25, 1933, with an initial rating of 5000 barrels.

Completion of Verette 1 has caused high excitement in Michigan oil developments and probably will be followed by a major drilling play in northern Isabella County. Fifteen tentative locations have been staked out in the area of the well this week.

Most of Vernon township is under lease. The old pool centers in Section 22 where the George Talbot Woods 1 (completed August, 1931) had the highest initial rating of 2500 barrels a day. South of the oil pool in Vernon township a gas pool producing from the Michigan Series sand also has been developed.

Development now is expected to swing east and north in the township.

One completion was made in Midland County, Thompson Brother's Hernick 1, Greendale township, NE SE NE Section 14, with 100 barrels initial, total depth 3560 feet.

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Isabella County—		
Mammoth Petroleum Corp., Verette 1, Vernon Twp., nw se se Sec. 23	18,000	3720
Strange & Flynn, Currie 1, Vernon Twp., se sw se Sec. 5	*	3960
Midland County—		
Thompson Brothers, Harnick 1, Greendale Twp., ne se ne Sec. 14	100	3560

*Failures; †Junked; ¶Million cu. ft. gas.

Ogemaw County Interest Increases Drill Permits

Mt. Pleasant, Mich.—Twenty-three permits to drill were issued this week bringing the total of the year up to 207 as compared to 101 for the same period last year and 183 for all of 1932.

Permits this week were due principally to the launching of a drilling play in Ogemaw County, and new developments in the Central Michigan fields.

Two weeks ago Alvin Weber's Wilcox 1, Ogemaw County, West Branch township, Section 34, was completed at 1726 feet in Traverse lime for 300 barrels initial and is now producing about 70 barrels a day. It was the first commercial well developed in that district of the state.

Three permits to drill in Ogemaw were issued this week while several others were projected.

The strike of a prolific well in Vernon township, Isabella County, on Mammoth Petroleum Company's Verette 1, brought two new permits and six tentative new locations.

Favorable structural indications in Denver township, Isabella County, from wildcat testing, accounted for five permits this week.

Increased production by deepening and acid on wells in the west side of Porter township and offsets accounted for 12 permits.

Permits this week also call for a widcat test in Gratiot County.

The permits follow:

Isabella County — Michigan Gas & Oil Company's Marthey 4, Denver township, NE SW SE Section 19; Marthey 5, SW NW SE; Marthey 6, SE NW SE; Marthey 7, NW NW SE.

Hirzel—Leland Development Company's Roberts 1, Denver township, NW SE SW Section 30.

Mellon & Pollock Company's Slentz 1, Vernon township, NE SW SW Section 23.

Stoddard and Darke's E. Brooks 1, Vernon township, Section 14.

Midland County—Fred W. Turner's Baxter 4, Porter township, NE NE NE Section 22. J. Mark Harvey's Messenger 1, Porter township, NE NE SE Section 36. Pure Oil Company's Hill 2, SE SE NE Section 18; Crandell 1, SW NW NW Section 16; Baxter 3, SW SW SE Section 15; Miller 2, SE SW NW Section 17, all Porter township. McClanahan Oil Company's Hathaway 3, C-S½ SW NE; Hathaway 4, C-N½ SW NE, both Porter township, Section 17. Stoddard and Darke's Emery 1, Porter township, NW NE NE Section 21. Theodore Oil Company's Campbell 2, NE SW NW; Campbell 3, SW SW NE; Campbell 4, NW SW NE, all Porter township, Section 17.

Gratiot County—William F. Brown's C. F. Johnson 1, Pine River township, NW NW NW Section 21.

Ogemaw County — William F. Brown' Riopelle 1, Mills township, NW NW SW Section 10.

Edward Christman's Ogemaw Country Club 1, West Branch township, NW NW SW Section 20; Ogemaw Coal Company 1, Ogemaw township, NE NE NE Section 36.

Isabella County Test Goes Through Gas to Dundee

Mt. Pleasant, Mich.—Extension of the gas producing horizon in Isabella County of the Michigan series formation more than a mile to the northeast was shown this week with Fred W. Turner's Mahar 1, Vernon township, NE SE NE Section 26, gauging 3,000,000 cubic feet per day of dry gas from 1325 feet.

The test, however, will not be completed as a gas well but will be mudded off and deepened into Dundee lime for an oil test, per the drilling contract calling for a Dundee well.

Strange & Flynn's Currie 1, Isabella County, Vernon township, Section 5, wildcat test 3½ miles northwest of production, drilled into water at 3960

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feet and will be abandoned. A show of oil and gas was made at 3915 feet.

Four other Isabella County outpost tests are active. In Broomfield township, Section 2, Otis Denslow's Cook 1, gas test, is driving pipe at 250 feet; Columbia Oil & Gas Company and W. Hunter Atha's Van Conent 1, Vernon township, Section 25, is spudding; Melvin & Brehm's Smith 1, Section 23, Denver township, is drilling at 3450 feet in Traverse lime, Traverse topped at 2969 feet with a show of oil and gas 15 feet in; and Ide Oil & Gas Company's Thayer 1, Vernon township, Section 10, skidding rig after losing hole at 250 feet.

Fishing jobs and shut downs during the past week have prevented any major progress on most of the other Central Michigan wells.

O. H. O'Neal's Caywood 1, Section 6, Porter township, Midland County, is drilling by tools at 1130 feet. Same township, McClanahan Oil Company's Densmore 1, Section 4, is fishing at 1190 feet. Greendale-Lee Oil Development Company's Hitsman 1, same county, Lee township, Section 13, is shut down at 2400 feet.

Wells Brothers' McCann 1, same county, Porter township, Section 25, is drilling below 2370 feet and McClanahan Oil Company's Breu 1, same township, Section 20, is drilling ahead of 800 feet.

In Saginaw County, Joe Molloy's Baurer 1, Richland township, Section 7, is drilling below 2000 feet.

Eastern States Area Has Longer Completion List

Cleveland, Ohio.—Field development in the Eastern States showed some increase of activity during the past week, a greater number of wells being completed than in the previous week; but the completions were nevertheless not numerous relatively. Total tests finished numbered 30, among them being nine oil producing wells, 15 gas wells, and six dry holes.

Ohio was the leader among the different states in completions, furnishing 17. West Virginia was second with seven, Indiana furnished four, and Kentucky and Illinois one each.

West Virginia

Company, Well and Location	Init. Prod. Bbls.	Depth
Calhoun County—		
Creed Barker & Co., Kelley....	¶	2096
Cabell County—		
Adkins & Marsh, Watts 1.....	¶	2863
Lincoln County—		
Kanawha Gas & Utilities Co., Johnson 2	¶	....
Mason County—		
John Miller & Co., Petty 1....	¶	....
Pleasants County—		
Dinsmore & Co., Patterson 5..	1	....
Ritchie County—		
Frank Finley & Co., Boehm Neeley 2	530	....
Wirt County—		
H. H. Burke, Showalter 8	5	1066

Southeastern Ohio

Company, Well and Location	Init. Prod. Bbls.	Depth
Noble County—		
A. E. Smithberger, Blendenbach 1	¶	1180
Morgan County—		
Buck Run Oil Co., Putnam 1..	¶	460
Monroe County—		
Swarthout & McCannan, Mallett 2	¶	1934
Washington County—		
Penn Ohio Gas Co., Summler 5	¶	1358
Martin Oil Co., Martin 1	1	644

Central Ohio

Company, Well and Location	Init. Prod. Bbls.	Depth
Athens County—		
Twenty-Five Associates Co., Caloway 2	¶	1082
Coshocton County—		
Palmer & Deisinger, Haun 1...	8	2581
Licking County—		
C. O. Moore, Penick 2	*	680
Medina County—		
Eaken & Curtis, Broadsword 7	*	439
Eaken & Curtis, Broadsword 8	*	384
L. F. McGrath & Co., Severcool 3	*	268
L. F. McGrath & Co., Severcool 4	30	346
Stark County—		
Canton Drop Forge Co., Fee 1	¶	4585
White & Co., Lorenz 1	¶	4498

Northwestern Ohio

Company, Well and Location	Init. Prod. Bbls.	Depth
Allen County—		
C. S. June, Hoffman 2	12	....
Mercer County—		
Franks & Quinter, Long 1	*	....
Wyandot County—		
Murphy & Son, Houpt 1	¶	1451

Indiana

Company, Well and Location	Init. Prod. Bbls.	Depth
Pike County—		
Indiana Southwestern Gas Corp., Keith 1	*	....
Harry N. Bell & Co., Craig 5..	¶	1104
Harry N. Bell & Co., Shea 1...	¶	1027
Vigo County—		
Pierson, Yeager & Co., Johnson 1	¶	....

Illinois

Company, Well and Location	Init. Prod. Bbls.	Depth
Crawford County—		
Frank Ellison & Co., Pleasant 2	7	....

Kentucky

Company, Well and Location	Init. Prod. Bbls.	Depth
Daviess County—		
Brenner & Adams, Jackson 4..	5	664

*Failures; †Junked; ¶Million cu. ft. gas.

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NEWS *from the* *Industry's* EQUIPMENT MAKERS

Book in Oklahoma For Reed Roller Bit

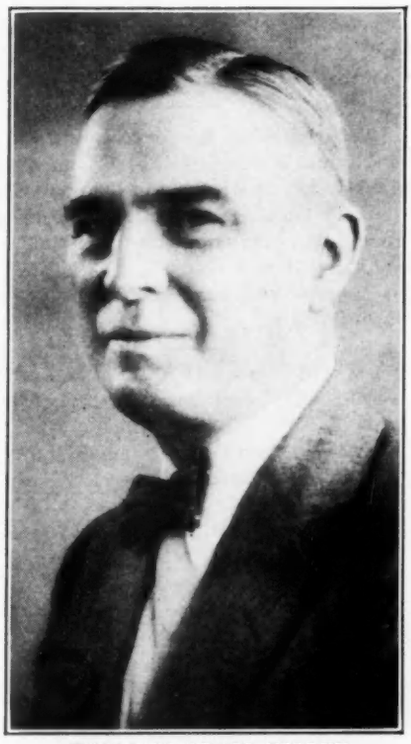
Howard Book, Reed Roller Bit Company, was transferred August 1 to Oklahoma City where he will be district manager for the Oklahoma area. He has been with Reed for a number of years, having represented them throughout Texas, the Mid-continent and Canada. Before going with them, he had received a broad training in the drilling end of the oil business, having served as a practical driller and tool pusher in charge of drilling.

HOWARD BOOK

Reading Iron Company Appoints William C. Wolfe

Reading Iron Company, Philadelphia, announces the appointment of William Craig Wolfe as vice president in charge of sales.

Wolfe brings to his new position a wealth of experience in the marketing and merchandising of iron products. During 1907-8 he was with Commercial Steel & Iron Company, Chicago, a brokerage company representing several mills. In 1908, he joined Seneca Iron & Steel Company, Buffalo, New York, as a salesman, remaining with that company until 1919. He was then appointed assistant to the president of Standard Steel Tube Company of Toledo, Ohio, and two years later became manager of sales for the Highland Iron & Steel Company. In 1928, he was made general manager, serving in that capacity until his recent appointment with Reading Iron Company.



WILLIAM CRAIG WOLFE

Wolfe was a moving factor in the organization of the Wrought Iron Manufacturers' Association. With Highland Iron & Steel Company he started the rolling of iron sheets and sash. In addition, he was responsible for increasing the number of bar iron shapes available.

Michigan Operators Make Adjustments for Code

Mt. Pleasant, Mich.—In advance of final adoption of a code under the NRA for the oil industry, there has been a general movement in Michigan to shorten hours and in some cases increase pay or at least maintain a wage level within the tentative level proposed by the government.

Haswell W. Grant, president of the Oil and Gas Producers Association of Michigan, said that unofficial reports coming to his desk indicated that more than 50 per cent of the drilling contractors were now using three eight-hour shifts instead of two 12-hour shifts as in the past. An eight-hour shift is being put into effect on virtually all new wells.

Several companies including major refiners and pipe line and producing companies are working out schedules for shorter hours and increased employment, some of which have been placed into effect, he said.

Tulsa.—Reports from the state proration office at Oklahoma City state that a proration office will be opened in Tulsa after September 1, 1933. George W. Kinney, assistant state proration umpire, will be in charge and probably will be assisted by one clerk and a stenographer. According to plans all reports from the Seminole district will be handled through the Tulsa office, the field work to be handled by J. J. O'Laughlin from the town of Seminole, where a district office has been established. Operators having headquarters in Tulsa and large acreage in the Seminole district, have been handicapped through lack of a local office since June 1, when Ray M. Collins' office in the Mayo Building was closed as a source of proration information.

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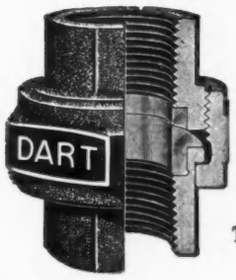

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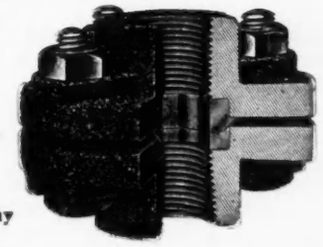

Squeaks *from the* BULL WHEEL

Mrs. Heck—I wonder, Mrs. Peck, if I could borrow your rug-beater.

Mrs. Peck—I'm sorry, Mrs. Heck, but he doesn't get home till 5 o'clock.

Welfare Worker—And have you any plans for the future when your sentence expires?

Edgar the Incorrigible—Yus. I've got the plans of two joolers and a post office to start with.

Photographer—Watch and see the dicky bird.

Child—Just pay attention to your exposure so that you do not ruin the plate.

"Has you made all arrangements for your marriage, Mandy?"

"Well not quite all, Dinah. I'se got to buy a trooso, an' rent a house an' get my husband a job, an' get some regular washin' to do. An' when them's done ah kin name the happy day."

A city visitor, from one of the wind-swept states gazed intently at the spiral fire-escape that wound its way down the rear of a thirty-story building.

"Gosh," he exclaimed. "That must have been a danged long ladder before the cyclone hit it."

Dickey—"My Dad is an Elk, a Lion and a Moose."

Mickey—"What does it cost to see him?"

Mother: "Johnnie, I know thousands of little boys and girls who would be glad to eat that spinach."

Johnnie: "Name three of them."

Grocer: We have some nice string beans today.

Mrs. Youngbride: How much are they a string?

Some people wonder what the Mormon wedding ceremony is like. It's something like this:

Preacher (to groom)—"Do you take these women to be your lawfully wedded wives?"

Groom—"I do."

Preacher (to brides)—"Do you take this man to be your lawfully wedded husband?"

Brides—"We do."

Preacher—"Some of you girls in the back will have to speak louder if you want to be included in this."

To drive safely, all you need is self control and a strong rear bumper.

Pop, the shop foreman, can remember when the young folks used to gas on the steps instead of vice versa.

Wife—Henry, here you are grouching about a few little bills for my hats, stockings and what-nots. Do you know, I could have married M. T. Head, the telephone magnate?—and he's a millionaire. But I didn't.

Henry—Yes, that explains why he's a millionaire.

"There is no such thing as certainty in this life," exclaimed the melancholy man.

"Ain't there!" responded Farmer Corntossel contemptuously. "I guess you didn't never play games with any of these men that goes around to county fairs."

Mrs. Brown always allowed her maid to have her young man in the kitchen in the evening. But knowing the girl was entertaining a new swain, she stole downstairs and listened at the kitchen door.

Next morning she said to her maid: "Mary, your new young man seems very quiet. I never hear any sound of talking while he is here."

"No, mum," replied the girl, "he's that shy he's done nothing but eat up to now."

Patiently waiting at a post office substation in a department store a busy business man overheard one of two female clerks whose attention he had tried to attract conversing like this:

"The evening cloak was a redingote in gorgeous brocade with fox fur and wide pagoda sleeves."

Thoroughly exasperated, the long-suffering individual exclaimed:

"I wonder if you can provide me with a neat purple stamp with a dinky perforated hem, the tout ensemble treated on the reverse side with gum Arabic? Something about 3 cents?"

"Did you know the defendant, Rastus?"

"Ah had a logical acquaintance with him."

"What do you mean by logical acquaintance?"

"Well, us both belong to de same lodge."

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